

and economic growth."

Murray said recent hearings conducted in the West by a select Senate water resources committee "brought out the need for a vigorous program of new (project) starts to gear us up to current and future requirements."

Mansfield said in a separate interview he was "sure the Congress next year will pay more attention to the needs of our own people in the field of natural resources and give priority to our own development."

"It will be well to keep in mind," he said, "that nobody will look after us in this field except ourselves."

Mansfield, a member of the Senate Foreign Relations Committee, said the Eisenhower administration seems to favor the spending of American money for dams in foreign countries, but not at home.

veto.

"Elimination of new starts as urged by the Eisenhower administration would have had that effect," Murray said. He added:


"The West and the rest of the country can thank the Congress for calling a halt to this downgrading of our natural resource development."

"Eternal vigilance on the part of the West is the price demanded for protection of reclamation."

"In Congress we will press the fight to start construction of Yellowstone Dam in Montana, and to press for the full development of the Columbia River and its tributaries, just as we have supported the full development of the Colorado River."

"Congress will continue to support public power that is the backbone of future reclamation expansion."

river was 103 per cent of the average and discharge of Rock Creek near Red Lodge was 82 per cent. Prairie streams in northern Montana showed some gains. They remained low in southern Montana where precipitation was light.



MADISON CHANNEL COMPLETED.—The Army Corps of Engineers officially completed a project unparalleled in American engineering annals Thursday with a quiet formal ceremony approving the reconstruction of the Madison River channel through the rockslide caused by the terrific earthquake of August 17. The lake formed by the rockslide is shown behind the slide here with the new channel for the famed fishing stream cut through the right side of the slide. (Kay Widmer photo)

Approve Work at Quake Lake

10-30-59
Bismarck Tribune
QUAKE LAKE (AP) — A special board of consultants tramped through four inches of snow Thursday afternoon at Quake Dam, and gave unanimous approval of work done in controlling a threat arising from last August's earthquakes.

Along with the board was Maj. Keith R. Barney, Missouri River division engineer for the Corps of Engineers. He lauded the work of his subordinates in building a deep channel through the quake-caused earthslide to eliminate any possible threat of water breaking through.

Work Is Complete
Corps of Engineers officials said their work, started more than two months ago, is complete. The cost is estimated in excess of one million dollars.

The slide thundered across the Madison Canyon when an earthquake toppled the side of an 8,000-foot mountain across a crowded campground. This formed a dam across the Madison River.

By cutting an 80-foot channel through the slide, Quake Lake formed and the slide was reduced from ten miles long to four and its impoundment cut to 47,000 acre feet of water from 79,000 acre feet. The channel slope was cut from 10 per cent an average of 3 per cent, permitting a more orderly flow of water.

"Nice Fishing Lake"
"It's a nice fishing lake now," General Barney, "instead of a constant flood threat." He spoke at televised ceremonies atop the dam.

As to the permanency of the work, engineers offered no guess to time, but said it will erode slowly over the years, but that there won't be any flash floods. With completion of the engineers' work, under the direction of Lt. Col. Walter Hogrefe of Riverdale, N.D., the site was turned over to the Forest Service. Hogrefe is the same Garrison district

Montana Tribune President Asks Basin Authority

The president of the Montana Farmers Union called Thursday for creation of a public corporation such as a Missouri Basin Authority for operation of the sprawling Missouri River watershed.

Leonard Kenfield, Great Falls, said such an authority, patterned after the Tennessee Valley Authority, was necessary for the development of Missouri Basin resources for the benefit of all the people living in the area drained by the Big Muddy and its many tributaries.

"There are efforts being made to take away your God-given resources," Kenfield said.

HE NOTED that even as it was snowing in Bismarck the snow pack was forming in the Rockies, providing a source of water for the Missouri River for next year.

At the same time, Kenfield charged, special interest groups are trying to tie up water rights on public domain lands in the Montana Rockies which would in turn tie up water for the Missouri River.

He mentioned railroads, bank corporations and speculative land corporations.

IN ADDITION to conflicts over water for downstream purposes, Kenfield said, there were basic conflicts in the upper reaches of the Missouri over water for irrigation and public versus private power.

Kenfield called for joint efforts by Farmers Union members not only in the field of agriculture, but also in the development of the nation's natural resources, particularly in the Missouri Basin.

He said there was plenty of water in the Missouri watershed if it is handled properly, but that there is a water shortage now because the water resource in the Missouri Basin is being squandered.

12 Great Falls Tribune
Tuesday, Nov. 10, 1959

Madison Canyon Reopening to Public Next Spring Plan of Forest Service

MISSOULA — The Forest Service plans to reopen the Madison Canyon to the public next spring, Charles L. Tebbe, chief Region 1 forester, informed the Missoula Kiwanis Club.

The official predicted that a large proportion of the millions who visit Yellowstone National Park next summer and thereafter will want to see the nearly earthquake and slide area.

The physical phenomena, such as the slide and fault lines, have drawing power in themselves, according to the speaker. Already, he said, geologists from all over have had a veritable field day.

Nature's spectacular action the night of Aug. 17 stimulated national

wide interest, stated the official. He said no piece of real estate in the country is so well publicized as the scene of the Madison Canyon tremor and slide. Thousands have been turned back by the roadblocks that were installed as a safety precaution, he reported. Recognizing the interest and the scientific value that has attached to the area, the Forest Service has determined to give it a special geologic area designation, the regional forester noted. He explained that it will be managed to preserve the inherent values and to give the greatest possible satisfaction to sightseers, students, campers and picknickers as well as other users of the land.

Tebbe related that the Forest Service has a task force in the area now to delineate boundaries of the geologic area; plan the needed access to points of interest; determine the sanitary and recreation facilities that will be required, and decide what will be necessary in the way of maps, literature and other interpretive service.

The forester declared that the earthquake of Aug. 17 triggered a series of events that have become an important addition to the history of Montana. He said the tremor had a profound effect on Hebgen Lake, tilting its base so that there were successive surges of water, first one way and then the other. Then, he said, it funneled to the dam end of the lake like a battering ram and swept over the top. He added that some figure the wall of water was three feet high but there is evidence suggesting it might have been up to 20 feet high.

That water coursed down the canyon in a torrent, according to the speaker. He reported that cars were picked up, rolled over, twisted and broken to bits; campers lost their lives; survivors, convinced that the dam had broken, tried desperately in the darkness to get their families onto higher ground.

Continuing, he related that 45 to 60 minutes later there came a frightening, deafening roar, a choking cloud of dust filled the canyon, a terrific wind reportedly so strong as literally to tear the clothes off people, began to blow, and the water in the river so recently rushing downstream suddenly was flowing upstream. Such happenings in the dark of night were stunning in their effect on people startled from sleep, he said.

The official stated that no one knew how many campers were buried. He said the 2,800 requests received initially by the American Red Cross from all over the country dwindled as time passed until now it is presumed that 19 were buried.

Glasgow Courier 10-27-59 Glasgow, Mont. WOULD MAKE ENGINEERS REMOTE

The Bismarck, North Dakota, Tribune comments upon a rumored move to close the Garrison district of the Corps of Engineers at Riverdale, North Dakota.

"Elimination of the Garrison district would mean that there would be no representative of authority, and no engineer's office, north of Omaha, which would amount to all but total divorcement of the Corps of Engineers from the upper Missouri basin," the Tribune declares.

There is no gainsaying the truth of this statement. Corps activities, and they are many and varied, that extend to the eastern slopes of the Continental divide, would be administered hundreds of miles away.

The North Dakota newspaper states that this move to abolish the Garrison district, of which the Fort Peck area is a part, is being proposed as a so-called economy measure. It points out that actually, most saving would only be "book" savings, that there would be little actual reduction of employees and that savings would be offset by higher travel and other costs.

This area has had a close relationship with the Corps for more than 25 years. Civic leaders here watched the closing of the Fort Peck district office and its removal to a more remote location without objection, feeling, that as citizens, they should recognize the benefits of consolidation. Some felt at that time, without airing their views publicly, that Fort Peck itself would have been a more central site for the district than Riverdale is.

Omaha is indeed remote and will leave us to deal with officers and bureaucrats only remotely acquainted with our country and its problems. There are many flood control

19 Dead Under Slide
Assessing the project were Dr. G. Straub, University of Minnesota hydraulic engineer; I. C. Ele, noted construction engineer of rock and earth dams from Oakland, Calif., and Edward Burl of Upperville, Va., retired engineer for the corps.

The slide is the burying ground of an estimated 19 persons who were trapped in their crowded underground when the mountain fell. Bodies of nine others were recovered.

A spokesman for the Corps of Engineers said workmen found evidence of bodies while cutting a channel. He said the force of the earthfall may have pulverized human caught beneath it.

18 Feet During August Quake

WASHINGTON (AP)—The government said Monday it has found a four-mile stretch of highway near Yellowstone Park that sank more than 18 feet as a result of the earthquake there last August.

The Coast and Geodetic Survey said this was the greatest drop ever measured after an earthquake in this country.

A special survey team moved into the area soon after the Aug. 17 quake. It covered on foot 110 miles of highway between West Yellowstone and Sappington, Mont.

The team reported the biggest drop was about four miles southeast of Hebgen Dam, where the earthquake hit hardest. The maximum settlement there was 18.36 feet.

Three Forks to be forced to go all the way to Omaha to make their wants known is not logical or helpful.

The Corps will lose many of its contacts in Montana and its close touch with us if this move is made. Its command is remote enough as it is.

Missouri Ice Jam Reported

Fargo Forum
11-15-59
RIVERDALE, N. D. (AP)—The Corps of Engineers here said Saturday it had a report of an ice jam causing some flooding on the Missouri River at Townsend, Mont.

The corps said the situation did not appear serious. It said there was water in the basement of a rest home at Townsend and some cattle had been stranded on an island.

At Townsend there was only about three inches of snow, but nearby Helena reported 16 inches on the ground.

The corps said Garrison Reservoir was free of ice but that the Missouri River was frozen at Williston and the Yellowstone frozen at Sidney, Mont., Saturday.

The next day it was discovered that about 230 people had been trapped above the slide and below a section of the highway that had disappeared into Hebgen Lake, he related. Rescue forces went to work immediately building detours around several lost and damaged sections of the highway so that by 9:30 p.m. all of those trapped had been freed.

Engineer Warns Soil Studies Necessary To Insure Safety of Madison Quake Dam

Great Falls Tribune 11-13-59

SAN FRANCISCO — Scientific soil studies must be continued on the huge natural dam across the Madison River, formed by the Montana killer quake last Aug. 17 near Yellowstone Park, before it can be declared absolutely safe, a prominent Bay Area engineer warned Thursday.

Stanley F. Gizlenski, chief of the earth dams section of the national soil engineering firm of Woodward, Clyde, Sherard & Associates, made this statement before members of the San Francisco Post, Society of American Military Engineers. Gizlenski's consulting engineering firm was retained at the Montana earthquake scene by the U.S. Corps of Engineers shortly after the disaster to make a preliminary study of the slide area and nearby Heben Dam.

Tentative investigation, Gizlenski explained, indicates that the Madison Canyon slide will remain stable against rapid failure caused by water accumulating upstream from the slide mass.

The earthquake tumbled some 43,000,000 cubic yards of rocky debris across the valley forming a natural dam, which has formed a lake containing approximately 80,000 acre-feet of water.

"However," he explained, "we must remember the disaster which occurred in the

Gros Ventre Valley, some 40 miles south of Yellowstone. "A similarly formed natural dam gave way there on May 18, 1927, killing seven residents of the tiny village of Kelly, Wyo," he continued.

The Gros Ventre slide occurred on June 23, 1925, the engineer said, in a remote valley under the shadow of the Grand Teton, near the tiny village in Jackson Hole, Wyo. It is believed an earthquake also triggered the slide.

"A portion of Sheep Mountain collapsed, spilling several million yards of shale, limestone and sandstone into the valley, completely blocking the Gros Ventre River," he said.

"The top of the natural dam thus formed stood some 180 feet above the stream bed. The base of the slide from the downstream to upstream side measured more than 8,000 feet.

"A lake four miles long and containing some 65,000 acre-feet of water, came within five feet of the top of the slide in the first 12 days," Gizlenski added.

Unlike the Madison River slide, the water never spilled over the top of the Gros Ventre blockade.

"Nearly two years later, on May 18, 1927, without warning the huge natural dam suddenly crumbled. The tiny town of Kelly, five miles downstream, was destroyed.

"A 20-foot wall of water crashed through the small settlement of Wilson, Wyo., another 20-miles beyond, some two hours later, causing widespread devastation," Gizlenski continued.

To prevent such a disaster ever occurring again in the area, the local district of the U.S. Corps of Engineers are continuing studies as recommended by Gizlenski's firm. Woodward, Clyde, Sherard & As-

has been flowing over the spillway at about a million gallons per minute," Gizlenski said. He explained the soil and rock composition of the Madison River slide is much different — and probably more stable — than the material making up the Gros Ventre slide.

Gizlenski joined the Northern California office of Woodward, Clyde, Sherard & Associates in Oakland 4½ years ago.

Prior to that, he served as civil engineer for the Missouri River Division of the U.S. Corps of Engineers, and was also head of foundation and embankment design for the Omaha District of the Corps.

Flood Danger at Townsend Inspected by Engineers

Independent Record, Helena, Mont. 11-23-59

A two-man team of army corps engineers specialists from Fort Peck arrived in Townsend today to inspect possible flood danger from a four-mile ice backup of Missouri river water south of town.

Maj. Robert A. Keyes, state civil defense director, said the team was called in after he made an inspection of the area Saturday at the request of Gov. J. Hugo Aronson.

Keyes said there is no immediate danger to townspeople unless temperatures take a sudden dip, freezing up the channel.

He said Townsend Mayor Had-

ley Rice and Sen. Lester Goodwin (D-Broadwater) will confer with Captain Nowak and E. V. Best of the army engineers to determine the extent of the flood threat and measures to be taken in the event of an emergency. Michael Massa, Broadwater county commission chairman, also is scheduled to meet with the Fort Peck specialists.

Nowak and Best are completing an inspection of a number of Missouri river danger areas, including floods along the Gallatin river which could pose a threat to Townsend and other downstream areas.

Corps' Work At Fort Peck Features State Activity

Glasgow (Mont) Courier 11-10-59

Montana construction activity during 1959 by the Army's Corps of Engineers east of the Continental Divide was highlighted by the expenditure of about \$6,000,000 on the second powerplant at Fort Peck dam. This project—the largest earth fill dam in the United States—has commanded a substantial portion of public attention since the beginning of its construction in 1933.

This was part of a report issued at the annual convention of the Montana Reclamation association in Butte this week by Lt. Col. Walter Hogrefe, district engineer of the U. S. Army Engineer district, Garrison, with headquarters in Riverdale, N. D.

units of powerhouse equipment will be completed. When finished the overall cost of the Fort Peck project will be about \$160,000,000. Annual project benefits will range in the neighborhood of \$12 million.

Other work in Montana during the calendar year consisted of local flood protection projects at Glendive, Billings, West Yellowstone and Ennis, and flood protection studies at Twin Bridges, Three Forks, Browning, Great Falls, Miles City and Billings.

Only three of these protection projects—those at Glendive, and Billings on the Yellowstone river, and Madison canyon — were brought under construction and completed during the calendar

and sent it crashing across the river and up the east side of the mountain on the other or north side. It covered the Rock Creek campground and took the lives of nine persons and perhaps caused the deaths of 21 more who are listed as missing.

Maj. Gen. Keith R. Barney, Missouri River division engineer for the Corps, flew at once to the disaster zone from his Omaha headquarters and ordered to the scene, Colonel Hogrefe and a work party of engineers and technicians from the district headquarters at Riverdale, N.D., and the area office at Fort Peck.

A field office was set up in West Yellowstone (later at Ennis) on Aug. 22 and from that

damaged during last August's earthquake, recommended that a 24-hour watch be posted on the downstream side of the Madison River slide.

This watch, Gizienski explained, would be to alert for seepage and possible movement of the slide mass. The soils engineering firm also recommended that careful observations by means of a system of wells be made of subsurface water flow under the natural dam to determine if there are signs of weakening.

Meanwhile, the Army Engineers have cut a 250-foot wide spillway lined with heavy rock 7 to 10 feet thick over the top of one side of the Madison River Dam. "Water

work on it is at about the 60 percent-of-completion mark. The two new 40,000 kilowatt units being installed are scheduled to go on the line in 1961, bringing the capacity of Fort Peck hydroelectric generation to 165,000 kw. Total cost of the plant is estimated to be in excess of \$27,000,000.

During the work season of 1959, Chicago Bridge and Iron company installed a large share of the No. 2 tunnel liner and the Eagle-Western combination of Colorado was making good progress on second plant's superstructure. Last year E. V. Lane corporation completed the powerhouse foundations and control shaft alterations.

During the coming year, about 200 additional contracts for vari-

bolstering a bridge and did not include the more ambitious proposals for the protection of the city from the Yellowstone with a system of dikes.

At Glendive the Corps built 2.23 miles of levee to contain the Yellowstone floods, such as the one that threatened during the spring of 1959, at a government contract cost of about \$164,930.

By far the most spectacular and bizarre project completed by the Corps in Montana during the past year was the spillway across the earthquake-triggered mountainside in Madison river canyon in the southwestern part of the state.

The quake of Aug. 17-18 cut loose the underpinning of an 8,000 foot-high mountain just above the mouth of the Madison river gorge

worked around the clock until a 50-foot deep slide spillway had been completed and the flood threat erased.

It had been feared that Hebgen dam, a Montana Power company structure seven miles upstream from the slide, would give way. With the added waters that had backed up behind the quake slide it was feared that a flood would roar downstream, causing tremendous damage to towns, ranches and farms below.

Although final figures haven't been totaled, it is estimated the cost of the slide spillway job will exceed one and one-half million dollars.

Fort Peck is an area office under the Corps of Engineers Garrison district headquartered at Riverdale.

Cole Presents City's Stake In Flood Control Project

Sheridan (Wyo) Press

3 Nov 59

Belief that the city is required to match federal funds used in the Sheridan flood control project is in error, says a memorandum presented to councilmen last night by City Manager Maurice E. Cole.

"Apparently there exists some misunderstanding as to the assignment of costs," the memorandum says.

And it continues: "The idea prevails that the city is required to pay a percentage of the total cost in about the same manner as federal funds are matched with local funds in various federal aid projects such as hospitals, highways, sewage treatment plants, etc. This belief gives rise to the fear that should the project be expanded or construction costs increase by reason of inflation, the cost to the city would be correspondingly increased and that the financial obligation of the city would then be beyond local control."

Stating that this is in error and fear is unwarranted, the memo says that all construction work including excavation wastes for filling abandoned stream channels and low lying marginal areas is financed entirely from federal appropriations.

The city will furnish the land for the project, and be responsible for water and sewer utility expenses. Private owned telephone, electric and gas utilities which must be moved will be entirely in the hands of companies involved and will not constitute a municipal expense.

The first stage, Ft. road to the vicinity of Kendrick Park and a section of Little Goose from the confidence to the railroad bridge, is the only division of the project upon which the city is currently working. Total estimated local costs, and this is a maximum estimate which the city hopes to undercut, is \$86,730.

Of the total estimate \$10,000 is private utility expense not borne

municipal utility funds. A total of \$16,880, which is also to be borne by the city is for contingencies, engineering and supervision.

Actually the maximum estimate of city responsibility is \$76,630. But as of Nov. 1, the city secured 79 per cent of the total square foot area needed for the first stage, with an additional seven and a quarter per cent promised free of charge. Total expenditure on the first stage to date is only \$4,270.74.

The memo says: "Thus it is shown that the liability of the city is limited and city costs are incurred only once. It is also shown that the amount of city cost is directly related to the willingness and ability of the people of Sheridan to help with the project."

Quake Helpers Return to Jobs

Bismarck Tribune

11-6-59

RIVERDALE—All of the 50 or more Garrison District staff members who saw service on the earthquake slide spillway job at West Yellowstone and Ennis, Mont., field offices returned to the Riverdale home base last week. The field office was opened at West Yellowstone on Aug. 22. Late in September the office was moved to Ennis, downstream from the slide on Madison River, where it continued to operate until its closure on Oct. 30.

The Garrison District group was headed by Lt. Col. Walter W. Hogrefe, district engineer. H. F. Michel, head of the engineering division, was in charge of the slide engineering work and H. G. Hutchins supervised the construction end of the project.

Phase one of the work was marked by the cutting of a 14-foot channel and lining it with 10-foot rock armor. This channel went into service Sept. 10. Erosion, however, on the downstream end of the slide caused an engineering change that resulted in cutting the

Madison Flood Danger Is Over

Chief of Engineers
Pleased With Work

OMAHA (AP). — There is no longer danger of flooding in the Madison River Valley of Montana below earthquake damaged Hebgen Dam, Maj. Gen. Keith R. Barney, Missouri River Division engineer, reported Saturday.

Gen. Barney finished during the night from inspecting the completed emergency flood control project made necessary when an earthquake last Aug. 17 broke loose a rock slide and sealed off the valley below the dam.

A huge body of water which engineers dubbed "Quake Lake" built up behind the rock slide and the chance that it might let go suddenly and cause down-valley flooding set engineers to work carving a floodway over the surface of the slide to carry off Quake Lake waters smoothly without gorging. Water first overtopped the slide Sept. 10.

Gen. Barney and Wendell E. Johnson, chief of the division's engineering section, met at West Yellowstone, Mont., with the board of the private engineering consultants employed and reported they were pleased with the work. Gen. Barney said the emergency flood control operation is now terminated and equipment moved off. The area engineer's office set up at Ennis, Mont., near the work site has been closed.

Murray Asks Great Falls Tribune Budgeters For Projects

WASHINGTON (AP) — Sen.

Quake Lake Job Okayed

10-31-59

QUAKE LAKE (AP) — A special board of consultants tramped through four inches of snow Thursday afternoon at Quake Dam then gave unanimous approval of the work done in controlling the flood threat arising from last August's earthquakes.

Along with the board was Maj. Gen. Keith R. Barney, Missouri River division engineer for the Corps of Engineers. He lauded the work of his subordinates in building a deep channel through the gigantic quake-caused earthslide to eliminate any possible threat of flood water breaking through.

Work Is Complete

Corps of Engineers officials said their work, started more than two months ago, is complete. The cost was estimated in excess of one million dollars.

The slide thundered across the Madison Canyon when an earthquake toppled the side of an 8,000-foot mountain across a crowded campground. This formed a dam across the Madison River.

By cutting an 80-foot channel into the slide, Quake Lake formed behind the slide was reduced from seven miles long to four and impoundment cut to 47,000 acre feet of water from 79,000 acre feet. The channel slope was cut from 10 per cent an average of 3 per cent, permitting a more orderly flow of water.

"It's a nice fishing lake now," said General Barney. "Instead of a constant flood threat." He spoke at televised ceremonies atop the slide.

As to the permanency of the slide, engineers offered no guess as to time, but said it will erode slowly over the years, but that there won't be any flash floods.

With completion of the engineers' work, under the direction of Lt. Col. Walter Hogrefe of Riverdale, N.D., the site was turned over to the Forest Service. Hogrefe is the corps Garrison district engineer.

19 Dead Under Slide

Assessing the extent of the

is available and will come from

Six Counties Receive Income From Leasing Billings Gazette

11-5-50.
HELENA (AP) — Six Montana counties were sent checks totaling \$14,915 Wednesday for shares of lease income from land in the Fort Peck flood control project.

State Treasurer Horace F. Casey said the money is 75 per cent of the Army Engineers' annual income from leases on the land. The percentage apportioned to the counties is set by federal law.

Phillips County got the largest check Wednesday, \$4,506. McCone County got \$2,685, Petroleum \$2,426, Garfield \$2,371, Valley \$1,624 and Fergus \$1,302.

Quake Lake above. This phase two of the job was completed Oct. 29.

Three members of a special four-man consultants' board pronounced the channel adequate following an inspection on Oct. 20. The board was accompanied by Maj. Gen. Keith R. Barney, Missouri River Division chief for the Corps of Engineers. He, Wendell Johnson, division engineering chief, and F. B. Slichter, engineering chief for the chief of engineers, praised Col. Hogrefe and staff members for "an extremely difficult job well done".

By Saturday morning, Oct. 31, the field office at Ennis had been closed and the last corpsman was on his way home. He was Henry C. Schmidt, who had been dispatcher for transportation vehicles. Other late-starters-for-home were R. J. Thomas, chief clerk and Wayne Likes, auditor.

Recommend funds for two Alchaha reclamation projects, and water evaporation control tests.

Murray is chairman of the Senate Interior Committee, which handles such legislation.

In a letter to Budget Director Maurice H. Stans, he asked bureau approval of money for Yellowstone Dam and the East Bench Unit of the Missouri River Basin Project.

Between four and six million dollars should be appropriated for the year beginning July 1 for a construction start on Yellowstone Dam in the Big Horn River, Murray said.

The East Bench Unit, he wrote, "should be allocated funds to permit the maximum rate of efficient construction."

Research in how to reduce evaporation from lakes and reservoirs, Murray said, deserves full financial support because of its conservation value to the reclamation program and to all other water users in drought-stricken areas such as eastern Montana.

Steele, noted construction engineer for rock and earth dams from Oakland, Calif., and Edward Burrill of Upperville, Va., retired engineer for the corps.

The slide is the burying ground for an estimated 19 persons who were trapped in their crowded campground when the mountain side fell. Bodies of nine others were recovered Saturday.

A spokesman for the Corps of Engineers said workmen found evidence of bodies while cutting the channel. He said the force of the earthfall may have pulverized any human caught beneath it.

3 Flood Control Projects Near Completion

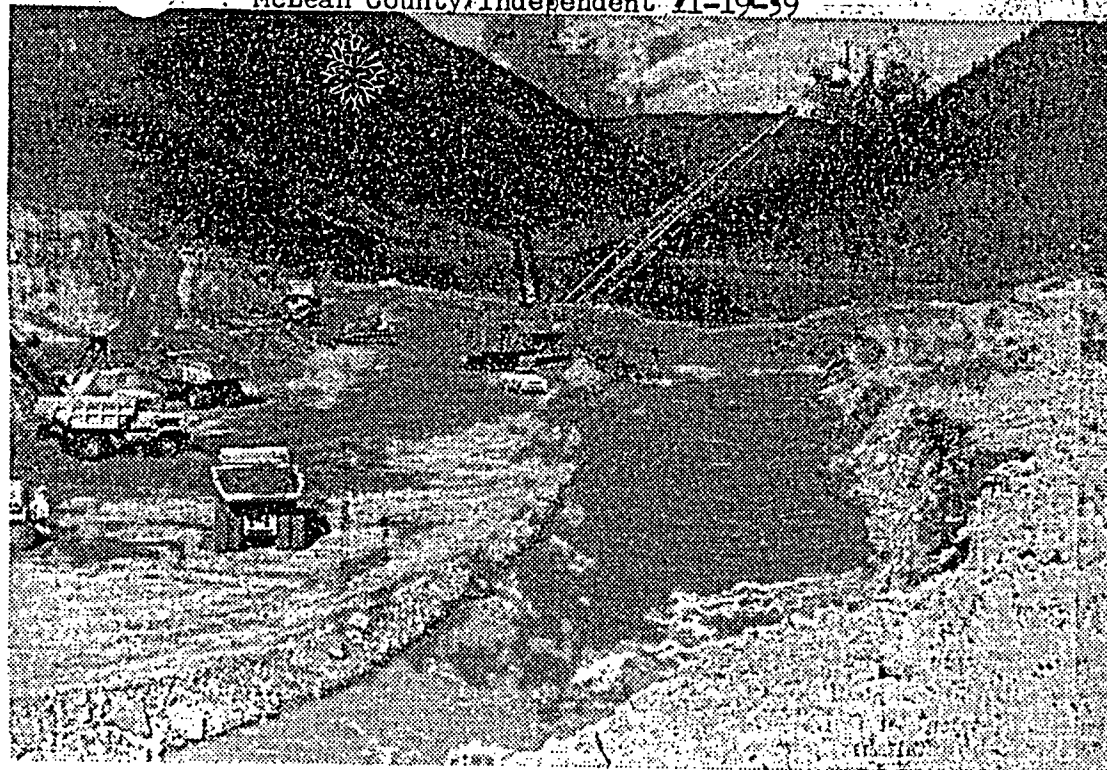
RIVERDALE—Three flood protection projects, two on the Yellowstone and one on the Little Missouri river, are on the verge of completion by Garrison District of the Army Engineers and will be turned over to local interests likely by Dec. 1, according to Lt. Col. Walter W. Hogrefe, Garrison District Engineer.

The emergency bank protection job at Billings, Mont., on the Yellowstone is being completed by the F. L. Flynn Co., of Billings under an \$18,025 contract. Albert and Anderson Construction Co., of Miles City built the Glendive levee system on the Yellowstone river under a \$171,000 contract.

The Marimarth, N. D., flood protection levee system on the Little Missouri river was built by the Oster Construction Co. of Hazen under a \$137,000 contract.

Madison River Spillway Approved

McLean County Independent 11-19-59



Paradise Dam Group Spokesman Says . . . Hearing on Clark Fork-Flathead Dam To 'Effect Western Montana's Future'

Great Falls Tribune 12-1-59

MISSOULA (UPI) — A hearing here Dec. 15 on proposed legislation to construct a large multi-purpose dam in western Montana has been described as "most important in its effect on the future of western Montana."

Sen. Ernest Gruening (D-Alaska) and probably at least one Republican member of the Senate Interior Committee will conduct the hearing.

Under consideration is a proposal to construct either Knowles or Paradise Dam in the Clark Fork-Flathead River basin.

In Missoula, Paul K. Harlow,

this key resource intelligently used to contribute to our prosperity."

The Senate bill authorizing the secretary of the interior to select the most desirable site in a 10-mile stretch of the Flathead and Clark Fork rivers is co-sponsored by Sens. James E. Murray (D-Mont.) and Mike Mansfield (D-Mont.). Murray is chairman of the Senate Interior Committee to which the bill has been referred.

Companion legislation has been introduced in the House by Rep. Lee Metcalf (D-Mont.), western district congressman. This is now before the House Interior Committee

of seasonal and cyclic industry. When the lumber market slumps, everyone suffers. When mining falls off, or suspends, the whole state drags."

Of the two feasible sites, Knowles is on the Flathead River just above its junction with the Clark Fork while Paradise is on the Clark Fork just below the junction.

The Corps of Engineers said Knowles would have an installed capacity of 512,000 kilowatts and generate 697,000 kilowatts of prime power. Paradise would have an ultimate installed capacity of

Private consultants and high officials of the Army's Corps of Engineers place the stamp of approval on the spillway built across the earthquake slide in Madison River Canyon, Montana, following an inspection tour just after completion of the work on October 29.

THE PHOTO above shows section of the new spillway "gorge" which ranges in depth from 50 to 80 feet and the system used in cutting the channel — use of a huge dragline and the action of the speedy water. The slide spillway job was begun on August 22 by a Garrison district disaster team and completed on October 29. The channel was built to diminish the flood threat from quake lake which was quickly backed up behind the slide. The earthquake, fatal to 29 persons, occurred on August 17.

whelming support of such water resource development for our area, we will be showing that we want

In his statement, Harlow said: "Far too long, now, western Montana has suffered from the swings

Estimated cost of Knowles would be \$234,627,000 and Paradise \$492,262,000.

Harlow said a project like Paradise Dam—roughly equivalent to two Hungry Horse dams—the power it produces and the water it stores, can make a substantial and continuing contribution to our prosperity."

Murray's bill also provides that the full amount of at-site power produced by the dam would be available for use in Montana. For more efficiency, however, power production would be integrated with the Bonneville system.

Metcalf, in commenting on the bill, said, "The dams already built, including Hungry Horse, have proven conclusively that the substantial benefits flow to the people and to private enterprise."

He pointed out Hungry Horse Dam brought immediate dividends to its area in the Anaconda aluminum plant at Columbia Falls and to areas farther away like the Victor Chemical Works west of Butte.

Andrews Asks Fight For Diversion Okay

Minot Daily News 9-11-59

FARGO—The Garrison Diversion project "will not necessarily come by itself just because it is feasible, sound desirable and necessary," Mark Andrews, Republican national committeeman and Cass county director on the Garrison Diversion Conservancy District board, told the annual convention of Western Sugar Beet Growers at their annual convention here Thursday.

"We must have an awakening of all our citizens to the danger that they face in losing their right to their share of the water of the Missouri river by delays in authorizing the project," Andrews said. "This water," he added, "may mean our economic survival. We, as North Dakotans, must convince the nation that our project is entitled to be first."

Officers of the association were reelected at the convention. They are C. Einar Johnson, Warren, Minn., president; Worth Larson, Chinook, Mont., vice president;

E. W. Rising, Washington, D.C., executive vice president; and Fred Sanborn, Great Falls, Mont., secretary-treasurer.

Stressing the great economic importance of the Diversion project to the area, Andrews said there is danger that it could be lost.

"We must recognize that there are those selfish interests who claim all the water of the Missouri river for their own use, even to the extent of refuting their solemn agreements. We must recognize the effect of the unrealistic and shortsighted view of many opponents of reclamation about our agricultural surpluses and the relation to new projects."

While not opposed to the foreign aid program developing reclamation projects in foreign lands, Andrews said "surely the building of reclamation projects here in America will help to strengthen our own economy on which the whole world is slowly becoming more dependent."

Most of the program was devoted to speeches and discussions of various farm problems.

Clark Jenkins, Fargo, agricultural agent for the Greater North Dakota Assn., spoke at the afternoon meeting, filling in for Rep. Don Short (R-ND), who had to remain in Washington.

Jenkins said North Dakota grain farmers are underemployed, and suggested that livestock enterprises would help solve the problem.

He said mechanization has greatly increased the grain farmers' capacities and allowed more leisure time. And he said raising livestock would bring increased income to North Dakota farmers, and give them something to do with the time they are saving with mechanical help.

Cut Won't Hurt N. D. Too Much

Bismarck Tribune

9-11-59

Sen. Milton R. Young (R-ND) says he believes the 2½ per cent cut from original proposals will not adversely affect North Dakota projects in the new works money bill passed Thursday by Congress over President Eisenhower's veto.

Young, making the comment in a telegram to the Associated Press here, noted that the Corps of Army Engineers will be permitted within limits to divert funds from one of its projects to another if necessary.

YOUNG SAID the new bill passed over the veto provides \$415,000 for the Garrison diversion—investigating program in North Dakota. This total is with 2½ per cent snipped from the original proposal.

Other North Dakota items covered in the bill include \$5,050,000—minus 2½ per cent—for continuing work on Garrison Dam; flood control on the Heart River near Mandan, \$800,000, minus 2½ per cent, and for flood control on the Red River near Fargo, \$386,000 minus 2½ per cent.

The Corps of Engineers had testified, Young said, that the \$800,000 originally proposed for the Heart River project, with \$550,000 carried over from last year, would be sufficient to complete the job by Nov. 30, 1960.

ALSO IN THE money bill, Young said, is \$15,000—now less 2½ per cent—to undertake investigation of the adequacy of Darling Dam on the Souris River north of Minot, a survey planned jointly by the corps of engineers and the Fish and Wildlife Service.

"I doubt if the 2½ per cent cut will adversely affect North Dakota projects," he said. "Savings may well make up for this lower amount."

In South Dakota, a Corps of Engineers spokesman said he had "no quick way of evaluating the effect on the Oahe project."

(Oahe's budget will be cut \$1,087,500 by the bill.)

The estimated total to be spent on Oahe was \$380,000,000. Of that, contracts have already been let for approximately \$129,000,000 with

Works Bill ---

(Continued from Page 1)
years, eight months in the White House.

Senate action put the bill over in the face of the President's objections, since the House had voted 280-121 to override. That was 12 votes more than the two-thirds margin required.

IN THE SENATE the count was 72-23, or 8 more than the required two-thirds.

Twelve Republicans joined 60 Democrats in the Senate vote to override. The Republicans were Sens. Allott, Colo., Capehart, of Ind., Cooper, of Ky., and

How They Voted

WASHINGTON (AP) — Here is how Dakota congressmen voted as the House overrode the President's public works bill veto: North Dakota, Burdick for, Short against; South Dakota, McGovern and Berry for.

Idaho, Fong, of Hawaii, Hickenlooper of Iowa, Langer of N. D., Martin of Iowa, Mundt of S. D., Schoeppel of Kan., Scott of Pa., Young of N.D.

On the losing side were 21 Republicans and two Democrats—Sens. Byrd of Va., and Lausche of Ohio.

THE \$1,185,309,093 measure, a perennial congressional favorite, contains construction or planning funds for flood control, navigation and reclamation projects for every one of the 50 states.

It sometimes is called "The Pork Barrel Bill," but many legislators angrily denounced this label.

They say the projects are essential to preserve the country's soil resources, and to protect cities from flood damage, and to permit full use of the nation's harbors and waterways.

Reservoir Storage Tops '58

9-11-59

Missouri river main stem reservoirs were drawn down heavily during August but at the end of the month held 2.5 million acre feet more storage than at the end of August, 1958.

Thus, "some gradual progress toward filling the relatively new reservoir system up to desired operating levels for more efficient public service continues to be made in the face of adverse runoff conditions that have existed for a period of five years, the Reservoir Control Center at Omaha, Neb., reported."

inately the same amount as during August a year ago. Total storage at month's end totaled 25.1 million acre feet.

The drawdown of Garrison reservoir was the greatest, accounting for 611,000 acre feet of the total. Figures for other reservoirs were Fort Peck, down 174,000 acre feet; Oahe, up 4,000; Fort Randall, down 465,000; and Gavins Point, down 35,000.

Power generation at the four main stem hydro plants continued to establish new records. An all time record of 4,361 million kilowatt hours was generated during the month. The peak hour generation rate was 2,400 kilowatts recorded on Aug. 15.

A record also was set in navigation, with commercial tonnage for the 1958 season rising to 566,000.

Fort Randall led in power output with 163 million kilowatts. Garrison was second with 146 million. At Fort Peck the output was 63 million and at Gavins Point 61 million.

Williston Fights Closing Of GN Underpass

BISMARCK (AP) — An underground crossing of the Great Northern railroad tracks at the southeast edge of Williston and resistance to its closure will be the subject of a hearing before the Public Service Commission in the courthouse at Williston on Nov. 4 (10acs).

The Williston Livestock Commission and others have started action before the commission, reporting the GN plans to close the underpass. It has maintained for many years and alleging its maintenance is required by public necessity.

THE SPOKESMAN said, "It's not difficult to understand why we cannot evaluate the impact of a one million dollar cut in a project totaling 380 million dollars.

"The cut could be significant. Then again we will probably be able to live with it."

Congress overrode the President's veto Thursday — the first time this has been done in his six years.

(See WORKS BILL, Page 2).

At River Meet

Aandahl Expresses Cautious Optimism On State Diversion

RUGBY (M) — If words were dollars, the Garrison Diversion project would be nearing completion, said Asst. Interior Secretary Fred G. Aandahl here Monday.

In a talk prepared for delivery to the North Dakota Water Users Assn. and the Rugby Chamber of Commerce, Aandahl had more discussion of the long-hoped-for water project but little in the way of promises from the federal government.

Interior Secretary Fred A. Seaton has given the diversion project

his close personal attention and ardent support, Aandahl said. But he added that the road ahead still is full of humps and pitfalls.

"BUT THE STAKES are high and the rewards great for the future of North Dakota," Aandahl said. "I am sure of eventual success."

The former North Dakota governor was to speak Monday night to a similar meeting at Jamestown. Over the weekend he addressed audiences at ceremonies marking dedication of new construction in Theodore Roosevelt National Memorial Park.

To the Rugby group, Aandahl said the entire reclamation program stands as a memorial to Theodore Roosevelt and other leaders of the West.

Citing advantages to the state of irrigation from the Missouri River, Aandahl answered one criticism voiced by opponents of the project — the question of crop surpluses.

"With the development of irrigation, land will be diverted from wheat production, and corn grown on irrigated acreage will, for the most part, be a silage or grain crop to be fed on the farm for increased and better livestock production," he said.

MORE IMPORTANT than crops, he added, will be job opportunities for the young persons who now leave North Dakota. He said irrigated areas of western Nebraska typically support 27 times as many people and provide 40 times the personal income of adjacent dryland areas.

"I frankly feel," said Aandahl, "that here, as elsewhere, reclamation's greatest accomplishments are measured, not through bushels and tons and dollars of agri-

Public Works Bill Passes

Over Ike's Veto

WASHINGTON (AP) — Congress snapped President Eisenhower's unbeaten veto string Thursday to give Democrats a resounding late-evening victory.

With heavy Democratic majorities in control, the House and Senate overrode Eisenhower's veto of a second pork barrel public works money bill—the first time they've been able to enact legislation over a veto in the more than 6½ years of his presidency.

At the same time, the House completed congressional passage of a third-round housing bill shaped to meet most of the objections that caused Eisenhower to reject two earlier bills in this field. Both those vetoes stood up. The President is virtually certain to sign this third-round bill.

Adjournment Nears

These developments came as Congress moved ever closer to adjournment of a session that began eight months ago.

Congressional leaders aimed to wind up work next Monday if possible. But the threat of a possible all-out battle over civil rights hung over these plans.

Ever with Thursday's setback, Eisenhower had an impressive 145-1 veto score over Congress, which has been dominated by the opposition Democratic party for all but two of his years in the White House.

The House acted first on the public works bill by a 280-121 roll-call vote—12 votes more than the two-thirds majority required to override.

The result was greeted in the House by an exuberant burst of cheering from the Democrats and silence from the Republican side.

Senate Is Quiet

Less than two hours later, the Senate completed the overriding action by a 72-23 vote or eight more than two-thirds.

Unlike the House, there was no applause or other demonstration

Public Works

(Continued From Page 1)

ment housing programs. A key section gives the Federal Housing Administration another eight-billion dollars in authority to insure home mortgage loans.

One important piece of business yet to be disposed of by Congress is a bill to allow a higher interest rate on series E and H savings bonds.

Senate-House conferees met for an hour Thursday in an effort to compromise differences, but afterward House Speaker Sam Rayburn (D-Tex.) said it looks to him like an impasse, at least at this point.

Would Lift Ceiling

The House passed a bill which would allow the Treasury to lift the current 3½ per cent ceiling on these bonds to whatever rate it wishes.

The Senate version of the bill would fix a ceiling of 4½ per cent, but would allow the Treasury to use a lower rate. The Eisenhower administration opposes the Senate proposal.

Perhaps the biggest job ahead of Congress is the foreign aid money bill, due to come up in the Senate on Saturday.

This likely will carry Congress over at least through Monday, and possibly longer.

A big question is whether Southerners will stage an extended fight over a rider to that bill. That rider would extend the life of the Civil

Rights Commission for two years beyond Nov. 9.

"If they do, congressional leaders fear opposition forces will come out fighting for more extensive civil rights measures."

Aandahl Predicts Diversion Plan OK By January

JAMESTOWN (AP) — Fred G. Aandahl says he is confident the Bureau of Budget will send its approval to Congress by Jan. 1 on the Interior Department's report on the Garrison Diversion project.

Aandahl, Assistant Interior secretary, spoke here Monday night at a meeting sponsored by the North Dakota Water Users Assn.

He said the latest exchanges of opinions among reclamation officials were that planning should be focused on an irrigation project entailing 250,000 acres instead of the previously mentioned 470,000 acres.

Ultimately, he said, the Garrison Diversion project envisages the irrigation of one million acres or more.

In commenting about the controversial water projects bill, which was twice vetoed and overridden by Congress, Aandahl said he wanted it made clear there was no question on continuing water projects which were already being developed.

He said the whole point of difference was the appropriations for 67 new starts. Of the 67 new starts, he said, eight are under the supervision of the Bureau of Reclamation and two of the eight would just as well never be started. He said the other six should be started sometime.

Aandahl quoted Floyd Dominy, commissioner of the Bureau of Reclamation, when he said the Garrison Diversion unit plans are "on schedule." He said tentatively construction funds are set for 1963 with the first delivery of water from the Missouri River in 1969.

Aandahl said it may seem to many that the project report has been moving slowly.

"Yet when we consider the size and cost of the project, and the importance of proper timing," he said, "I am inclined to say very good progress has been made."

Corps Will Call For Bids On New Work At Project

Williston Herald
9-14-59
Another phase of work on the Buford-Trenton Irrigation District, river bank stabilization will open with an invitation to bid on the work to be issued about Sept. 15 by the Corps of Engineers, Corps representatives said today.

The work, comprising Schedule B of Stage II in the project, will consist of excavation of earth for toe trench revetment, placing of stone for toe trench revetment construction, and reconstruction of stone filled dikes and foundations.

Plans and specifications are expected to be issued about Sept. 15, a spokesman said. Estimated quantities of materials to be used or handled have been set at 210,400 cubic yards of excavation, 61,620 tons of place stone from the quarry, 15,749 tons of place stone from the stockpile and 10,700 tons of stone to be quarried and stock-

struction deadline, March 1, 1960; with the entire project to be completed not later than June 1, 1960.

Bids on another phase of Corps work, which includes reservoir access roads and recreation facilities in McKenzie county, will be accepted until Sept. 22 at Riverdale where they will be opened at 2 p.m. that day, spokesmen said.

The work embraces two schedules which are actually separate contracts but may be let as one or two, the representatives said.

Site of the construction is the Tobacco Garden Creek Recreation area, about 20 miles north of Watford City. Schedule B includes 8,100 cubic yards of excavation, 1,800 cubic yards of gravel surfacing, 335 rods of fencing, one and a third acres of seeding, 41 guard rails, posts, a latrine unit, and three picnic unit areas.

Completion deadline for this schedule is June 1, 1960. Schedule C of the work includes construction and placement of project signs for all the reservoir recreation areas. Completion deadline is June 15, 1960.

many projects which show a close ratio of dollars and cents benefits to costs and require the use of indirect benefits in that ratio.

er's veto of an earlier public works bill carrying funds for hundreds of navigation, flood control, reclamation and other projects all over the nation.

The bill passed over Eisenhower's veto totals \$1,185,309,093—about 30 million dollars less than the earlier version. But it retains 67 new projects Eisenhower opposed—the same 67 projects which moved him to reject the previous bill on grounds it would open the way to massive spending in future years.

Housing Bill Passes

By contrast with the dramatic action on the public works bill, the billion-dollar compromise housing measure was passed by the House on a perfunctory voice vote. The Senate had passed it 86-7 Wednesday.

The compromise, less expensive than the two earlier measures Eisenhower rejected, furnishes authority for a variety of govern-

(Continued on Page 6, Col. 7.)

ences at ceremonies dedicating new construction in Theodore Roosevelt National Memorial Park.

Garrison Dam Reservoir and a
 oil pipeline are writing new
 history in the industrial develop-
 ment of the Great Northwest.
 This subject is featured in the
 September issue of The Connect-
 Rod, a new publication of the
 Service Pipe Line Co.
 Oil and the dam, a four-
 e article, tells how a pipeline,
 constructed by Service, and a
 dam, built by the U. S. Army
 Corps of Engineers under the Mis-
 sissippi River Basin Development
 program, are performing "invalua-
 ble services for the Dakotas."
 The story describes how the oil
 pipeline benefits the region
 through the operation of an effi-
 cient and economical transporta-
 tion system. North Dakota bene-
 fits by a payroll of 25 million dol-
 lars a year from the oil industry.
 Without economical pipeline trans-
 portation of millions of gallons of
 oil to a refinery at Mandan, the
 state's oil industry would develop
 at a slower pace.
 Garrison, on the other hand, is
 a project that will assure Dako-
 tas of flood control, irrigation,
 river water sanitation and other
 benefits for many years.
 The article goes on further to
 explain the relationship between
 the dam and the pipeline. Miss-

souri River waters, held by the
 dam, have backed over the flood
 plain, about 15 miles south of Ti-
 oga, where the pipeline crosses.
 It was buried there in 1953.
 Since the dam and pipeline are
 in a region that figured prominet-
 ly in the history of the country,
 some of the color of the past is
 included in the article.
 J. E. Wright of Williston recent-
 ly was appointed superintendent
 of Service's Williston district
 which includes the operation of
 the Tioga-Mandan line.

NO Politics in Make-Up Of Water Group: Davis

Bismarck Tribune 9-22-59

Gov. John E. Davis expressed
 surprise and regret Monday at a
 charge levelled by Democratic
 committeemen Sunday against
 composition of a committee making
 arrangements for a United States
 Senate committee hearing in Bis-
 marck next month.
 The Democratic group issued the
 critical statement following a rally
 at Fargo Sunday addressed by U.S.

Sen. Hubert Humphrey (D-Minn.).
 The statement said:
 "The Republican party of North
 Dakota has displayed an all-time
 low in common courtesy and good
 manners to the 47 per cent of the
 state's voters that voted Dem-
 ocratic in the last election."
 Davis said that the seven-man
 committee working on details of
 the Bismarck hearing of a Senate

Committee on National Resources
 was named without regard to
 political affiliations.
 "IT WAS SET UP on the sugges-
 tion of leaders in the North Da-
 kota water movement as a working
 committee and is composed of per-
 sons who have been active in this
 work with no thought of their party
 preferences," said Davis.
 He pointed out that he is a mem-
 ber of the committee in his capac-
 ity as governor and chairman of
 the State Water Commission; for-
 mer Gov. Norman Brunsdale is a
 member because of his interest and
 experience in the water program
 as former chairman of the water
 commission; Roy Holand is chair-
 man of the Garrison Conservancy
 District board of directors; L. C.
 Mueller is president of the state
 Water Users Association; Herb
 Lyons, Jamestown, and H. S.
 Davies, Minot, are long-time work-
 ers in the water development move-
 ment; and John O. Hjelle, Bis-
 marck, is assisting in local ar-
 rangements for the hearings, which
 will be held in conjunction with the
 annual meeting of the North Da-
 kota Water Users Association.

Biggest U.S. Water Study Gets Started Next Week

Bismarck Tribune 9-28-59

WASHINGTON (AP) — The na-
 tion's biggest water study gets
 rolling next week. The purpose:
 to prevent water shortages in the
 future.
 The Senate select committee on
 national water resources takes to
 the road for a series of 20 hearings
 in 17 states, beginning Oct. 7 at
 Bismarck, N.D.

Looking for ways to conserve
 and develop the nation's water
 resources for the use of millions
 of people still unborn, the com-
 mittee will hear hundreds of wit-
 nesses across the country. There
 have been warnings that the coun-
 try will be hard-pressed some day
 to provide food and water for a
 rapidly increasing population.

The committee, created during
 the past session of Congress under
 a bill introduced by Sen. Mike
 Mansfield (D-Mont), will be seek-
 ing answers to at least six specific
 questions in connection with water
 resource activities in the next
 half-century:

1. How much water develop-
 ment, including dams and other
 projects, is needed?
2. When will it be needed?
3. When will it be needed?
4. What should be the water
 development plan?
5. What levels of cost and ex-
 penditures would be justified?
6. How much water will be re-
 quired for specific time periods

er Commission, predicted require-
 ments of electricity; Interior De-
 partment, water recreation and
 fish and wildlife needs.
 Among witnesses at Bismarck
 and other hearing sites will be
 farm water users, public and pri-
 vate power groups, fish and game
 officials, health officials, college
 teachers and other interested
 groups and state officials.
 The hearing schedule includes
 Oct. 17 at Huron, S.D., and Oct.
 28 at Sioux Falls, S.D.

Panel Will Review N.D. Water Program

A panel discussion that will
 amount to a full-scale review of
 the North Dakota water develop-
 ment program will open sessions
 of the North Dakota Water Users
 Assn. convention in Bismarck Tues-
 day, Oct. 6.

The first annual convention of
 the association, formed earlier
 this year in a consolidation of the
 old North Dakota Reclamation
 Assn. and the Missouri Projects
 Assn., will be a one-day affair.

It is being held in conjunction
 with hearings here the following
 day of a select United States Sen-
 ate Select Committee on Water
 Resources.

CONVENTION sessions will be
 held in the Bismarck Municipal
 Auditorium with a registration desk
 at the hotel.

secretary and chief engineer of
 the State Water Conservation Com-
 mission; Lt. Col. Walter W. Ho-
 greve, Garrison district engineer,
 Riverdale; Bruce Johnson, projects
 manager for the Bureau of Rec-
 lamation, Bismarck; and Lyness
 G. Lloyd, state conservationist for
 the U. S. Soil Conservation Serv-
 ice, Bismarck.

E. M. GREGORY, Fargo, agri-
 cultural development agent for the
 Great Northern Railway Co., will
 be the panel moderator.

Panel members will discuss all
 phases of water control and use
 from flood protection and large
 dam impoundments to small, in-
 dividual farm projects such as are
 being carried out under a program
 in which the Soil Conservation

A SUBCOMMITTEE working on
 mechanics of the hearings consists
 of Fred J. Fredrickson, Washing-
 ton representative of the Greater
 North Dakota Association and the
 water commission; Oscar Berg,
 secretary of the Water Users Asso-
 ciation; Milo W. Hoisveen, state
 engineer, and water commission
 secretary; and Vernon Cooper,
 Hoisveen's assistant and secretary
 of the Conservancy district.

"The water development pro-
 gram is non-political and the fact
 that not even a thought was given
 to the political composition of the
 committee is proof of our intention
 to keep it out of politics," said
 Davis. "Members of the committee
 were chosen simply on the basis of
 the help they could give and al-
 though I am sure there are others
 who could have done just as much
 the committee is pretty representa-
 tive of the state's water interests."
 He added that as long as the
 subject had been brought up, it is
 his understanding that Berg hap-
 pens to be a Democrat.

Work To Start On Water Plant

Williston Herald

9-19-59

Ground breaking ceremonies for
 Williston's new water plant in the
 Lewis and Clark bridge area will
 be held next Monday morning, it
 was announced today by W. Dale
 Frank of A. and A. Contractors.
 Minot, which has the contract for

President. Allen Rawitscher, are expected to be present at the event.

A. C. (Bud) Henne, president of A. and A., and Art Weisenberger, secretary-treasurer, also will be on hand.

Details and definite time for the ceremonies are yet to be ironed out. Actual work on the plant will get under way Monday afternoon, according to Frank, who is a former Western Union manager in Williston.

A. and A. has established an office for the local operation at 129 South Main Street in the old American State Bank building.

committee will obtain reports from federal agencies and private consulting groups on such subjects as weather modification (cloud seeding), lake evaporation control, purification of salt and brackish water and seepage control.

These additional reports have been requested.

Federal Reclamation Bureau, expected needs in the irrigation field; Army Engineers, flood control and navigation; Agriculture Department, farm water needs and the department's water programs; Public Health Service, city water supplies; Commerce Department, industrial water use; Bureau of Mines, water use by mineral industries; Federal Pow-

er from Dickinson: Milo W. Holsveen.

Women Voters To Hear Talks On Water Use

The first general membership meeting of the Bismarck League of Women Voters for 1959-60 will be held at 8 p.m. Tuesday in the Unitarian Fellowship Hall, Ninth St. and Divide Ave.

Speakers will be Capt. Harold Strohecker of the Army Corps of Engineers, Garrison, Milo Holsveen, representing the State Water Commission, and Bruce Johnson, representing the Bureau of Reclamation.

The three will tell of their work and their own particular concerns about the use of water in North Dakota. This is part of a study by the league of the Missouri River basin.

All husbands of league members and those interested in joining the league may attend.

complete repackaging status of the Garrison Diversion Project, construction of which is dependent upon legislation now pending in Congress.

State Rep. L. C. Mueller, Oakes, will preside at all sessions.

A dinner at the Bismarck Municipal Country Club, at which Sen. Robert S. Kerr (D-Okla.) chairman of the Senate Select Committee, will speak and which other members of the committee will attend, is scheduled for 7 p.m. Tuesday evening.

All Water Plant Contracts Signed

Williston Herald

All contracts have been signed for the construction of Williston's new water plant, it was announced today by Everett Palmer, city attorney.

Performance bonds for Peter Kewit Sons, Kovast Construction Co., A. and A. Contractors Corp. and Main Electric Co. were approved by the city commission last Thursday.

A resolution for the financing of street improvement, sewer and water connections in District No. 1 was approved Thursday.

Cost of the work will be \$178,000, with property owners to pay at the rate of \$15 annual installments at six per cent interest.

Editorials

Water for a Growing America

Bismarck Tribune 10-6-59

It is appropriate that a Senate Select Committee studying the nation's present and future water needs hold its first hearings in Bismarck, the capital city of a Great Plains state in which water, or the productive use thereof, is of foremost concern.

The committee will travel to a great many other states in the course of its 19-hearing study, but in few places will it get a better demonstration of interest in water development.

Not will it find many better demonstrations of the problems that arise from an equitable development of the nation's water resources.

North Dakota, of course, is interested first and foremost in the irrigation aspect of the water program, of which the proposed Garrison Diversion project is an example of the grand scale.

But it offers examples of other water needs, such as those of industry and municipalities, based upon growing population, which are striking miniatures of the problems that face many metropolitan areas in other states.

GARRISON DAM IN North Dakota was the first major accomplishment of the huge Missouri River Basin program, the greatest regional attempt yet undertaken in this country to harness and put to work all the water resources of a large and integrated area.

In what has transpired here; another problem becomes immediately evident. Through Garrison

taken for granted just like the air we breathe. Actually, the experts say, water is getting to be one of America's most valuable resources, with the growth and security of the country hinging upon its wise conservation and use.

The Population Reference Bureau estimates that the United States will have added about 28 million people to its population during the decade 1950-1960 and projects a population of 260 million Americans by 1980 if present trends continue. By the year 2000—not 41 years hence—present growth rates would double our present population, bringing the total to 350 million.

There is no obvious reason to believe that these trends will change drastically. As a matter of fact, past forecasts of population growth have been on the conservative side. Projections prepared in 1955 proved to be 400,000 short of the actual estimated population by July 1, 1959.

TO PROVIDE FOOD for the millions of new mouths that will have to be fed, particularly in the face of dwindling acres of crop land, will take the kind of intensified production that comes with irrigation. To insure the millions dwelling in big cities of enough water to drink, and with which to flush toilets, will take conservation of water. To keep aluminum and plastics and other plants going will take still more conservation of water.

The committee's job, we under-

Bismarck Tribune N. D. Water Needs For Future Years To Get Review Here

Water needs of North Dakota 10, 20 and 50 years hence should be properly well outlined at the initial hearing of a Senate Select Committee on National Water Resources next Wednesday.

So should the ways of supplying the water requirements of North Dakota irrigators and municipalities.

The Bismarck hearing, to be held in the House of Representatives chamber at the capitol, will be the first the committee will hold during the next two months.

Most of the information the committee gets here will apply to North Dakota specifically, but some will begin outlining the national picture, too.

FOR EXAMPLE, Dr. Fred S. Hultz, president of the North Dakota Agricultural College at Fargo, is expected to go into the booming population growth of the nation with statistics showing vastly increased food requirements and half a generation hence.

This will be translated into increased water requirements both in order to insure a stable and plentiful supply of food and for municipal purposes.

Municipal water requirements are going to get a good deal of attention at the hearing, according to Milo W. Hoisveen of the state water conservation commission, who is helping to arrange details of the hearing presentation.

SOME NORTH Dakota cities already face serious water shortages and others foresee the day when insufficient water may curtail their growth.

All phases of the water picture will be covered in testimony before the Senate Select Committee. Some statements will be made to the committee verbally, while others will be filed for the committee's record.

Each quarter of the state will have at least one spokesman. In addition, others will file statements, some of them in behalf of municipalities and some of them in behalf of organizations or sections of the economy, such as stock growers.

Hoisveen said Friday that special invitations have been extended to the memberships of several North Dakota organizations to participate in the hearing. Among these are the North Dakota Bankers' Association, the Farmers Union, the Farm Bureau, Rural Electric Cooperatives, the League of Municipalities, League of Women Voters, agricultural extension service (county agents) and so on.

"The House chamber will hold about 300 persons, and we want it to be filled with people who have a stake in North Dakota's development," said Hoisveen.

U.S. SEN. Robert S. Kerr of Oklahoma is the chairman of the Select Committee, of which Sen. Milton R. Young of North Dakota is a member.

Kerr also will speak at the annual banquet of the North Dakota Water Users the night before the hearing, at the Municipal Country Club.

The Water Users convention will start at 9 a.m., Tuesday, in the Municipal Auditorium, with the public invited. Bismarck individuals and business firms holding memberships in the association are particularly invited to participate in the meetings.

State Is Heading For Real

been brought under control so that it can no longer be a great flood menace and so that water for municipalities, power production and navigation are insured. But so far, no start has been made on another phase of the total basin program which was as important in the original picture as any other phase of it: the beneficial use of water for food production through irrigation, such as would be accomplished by Garrison Diversion.

We are controlling the waters of the Missouri, but so far we are not using them except as they run down stream carrying barges, turning turbines and diffusing sewage.

nation's water needs are apt to be 20 and 40 years hence, and then find out what and where its water resources are and how they can be saved and used.

This is a big task, but it is of great importance to the future welfare of the nation, which, like any living thing, needs water to survive.

Williston Herald

9-25-59

GRAND FORKS, N.D. (AP) — North Dakota is heading for a real water fight, a federal official told delegates to the thirty-first annual convention of the North Dakota water and sewage conference here Thursday.

Bruce Johnson, projects manager, Bureau of Reclamation, Bismarck, warned the 140 city and state officials gathered at the annual banquet that the lower states are going back on the Pick-Sloan reclamation plan of 1944. The act, he said, governs use of the Missouri River Basin.

Johnson said states such as Missouri, Iowa and Nebraska have benefited from the reclamation and flood control projects completed in North Dakota and are not interested in irrigation work needed by this state.

North Dakota gave 500,000 acres to keep flood waters from the

lower states, he pointed out. This land was used for such projects as the Garrison Dam.

Johnson said in the past few years, the lower states had deserted the Pick-Sloan plan. He charged that Missouri governor James R. Blair was mainly "mainly responsible for this" and pointed out that Blair recently had written Sen. Stuart Symington urging economy in water development projects.

The speaker claimed completion of the irrigation plan under the agreement would bring an additional 850,000 people to the state, 430 new farms, 145 million dollars in new business and 40 new municipal water plants.

Riverdale May Lose District Army Engineer Office

Propose Omaha Take Over

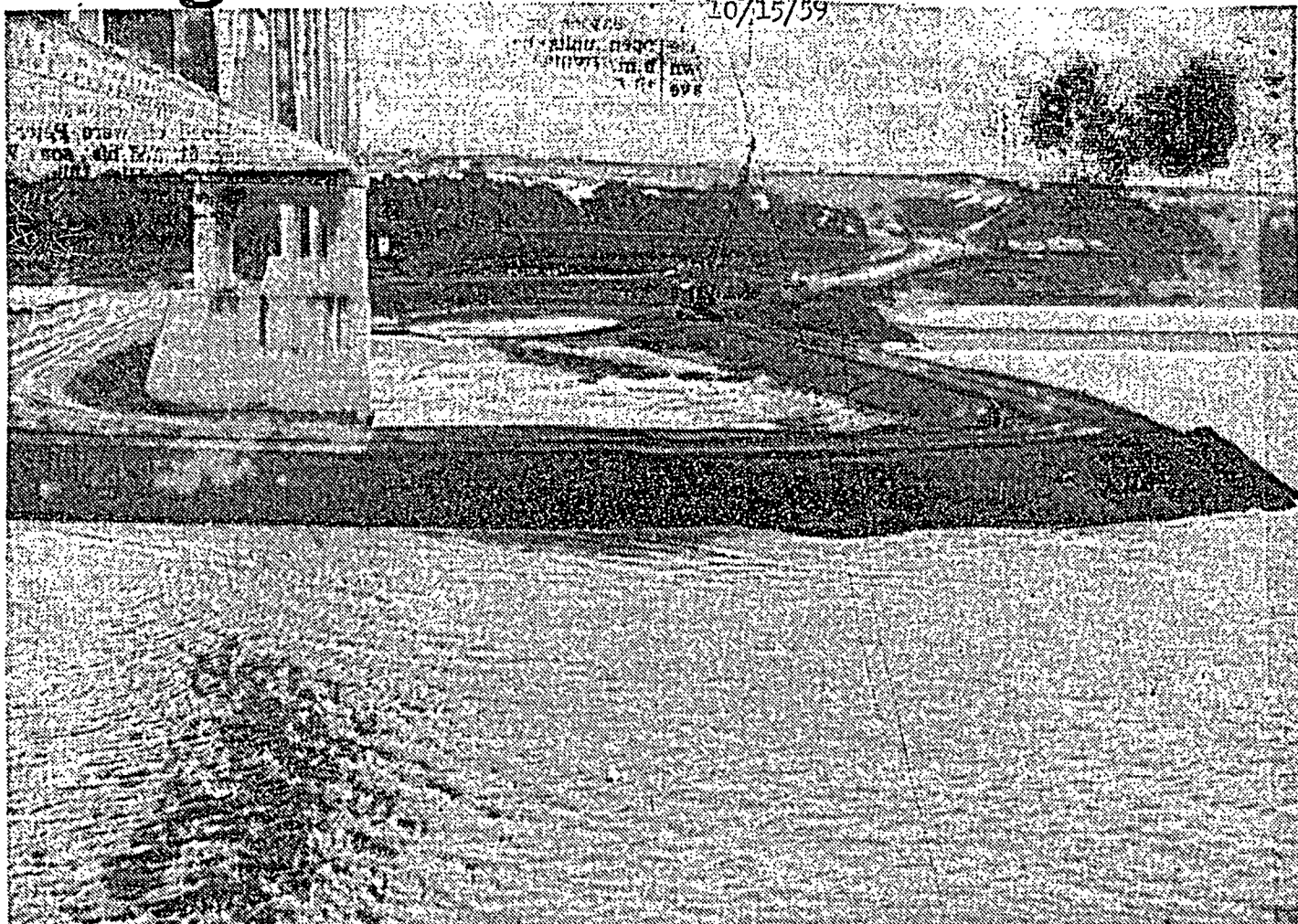
Plans are well advanced for the consolidation of the Garrison district office of the U.S. Army Corps of Engineers here with the Omaha district, a C of E spokesman has revealed.

The announcement, confirmed rumors of the changes that have been prevalent for some months. Under the proposed plan, Riverdale would become an area office for the Omaha district some time before the end of the current fiscal year which runs through June 30. Fort Peck currently is an area office under the district office here and apparently would remain that status.

The corps spokesman pointed out that Garrison district office, first at Fort Lincoln and then at Riverdale, was set up in 1946 to supervise building Garrison dam. Now that Garrison project is virtually completed, he said, the stipulated need for the district office has ceased to exist.

The extent of personnel reductions and transfers necessary to accomplish such a shift is not known at this time, the spokesman said. If the change is made there would remain two districts in the Missouri river division of the Corps—those at Omaha and Kansas City. Until July 1, 1956, when it was consolidated with Garrison, there also was a district office at Fort Peck, Mont.

The announcement brought a sense of urgency to an effort, by state officials and civic leaders to preserve the status of Riverdale as a North Dakota community. With help of federal agencies, avenues looking toward establishing an intake structure to take water from the Missouri river into the city's water supply system.



—Williston Herald Photo

NEW WATER PLANT ACTIVITY — Work at the site of Williston's new \$3 million water plant was advancing steadily this week in spite of the unseasonal weather. The Herald's photographer today found a busy crew of men with heavy machinery engaged in preliminary work which already gives clear outline of the scope of activity.

Shown in the foreground of the picture is the coffer dam being constructed to provide a "dry-bottom" pit where the huge intake pipes will be laid to take the city's water supply from the river into the plant atop the hill. The large crane power shovel is removing the dirt from the basin to build up the coffer dam, while the power pump at lower right of dam structure pumps the water from the basin over into the river.

(No. 3) shown in foreground to the pump house, to be located just south of the railroad track. From here it will be pumped under the track to the treatment plant on the hill, also passing through a large sediment basin.

Much of the heavy machinery on the job is visible along the road at right leading to the coffer dam site and in the distance atop the hill.

Work has also been started on the supply road to the new plant site, which will be hard-surfaced when completed, and takes off from Highway 85 beyond the curve approaching the bridge.

Peter Kiewit & Sons Co. of Omaha has the prime contract for the intake structure, while work started on the treatment

North Dakota Nitrogen Co. last year announced plans to build a chemical plant to produce fertilizer there but the project has bogged down and recently the concern has been looking at other sites.

Riverdale Fertilizer

McLean County Independent (ND) 10-15-59

Plant Apparently Not in the Making

Riverdale's proposed multi-million dollar fertilizer plant may never materialize, it was learned Monday.

Reliable sources have stated that the plant will apparently be built in the Bismarck-Mandan area with another branch at Wahpeton.

This comes close on the heels of the proposal to consolidate the Omaha and Garrison District offices of the Army Engineers. This proposal has been in the making for some time.

Last January an announcement was made that the plant would be constructed at a site near Riverdale as soon as the frost was out of the ground. There was to have been a work force

of about 700 on hand for two years during construction and the plant was to have required a permanent operating force of 200.

It had been estimated that the cost of the plant would be about \$15,000,000.

The Riverdale-Omaha change-over, making this an area office under the Omaha district, if put into effect, may take place before the end of the fiscal year on June 30, it was estimated.

Sources at Riverdale have stated that a noticeable cutdown has been taking place at that location.

A Corps of Engineers spokesman pointed out the fact that the Garrison District office was set up in 1946 for the express and limited purpose of building Garrison Dam. Now that the Garrison project is virtually completed, he said the stipulated need for the district office has ceased to exist.

The extent of personnel reductions and transfers necessary to accomplish such a shift is not known at this time. However, it is felt that most of the Riverdale unit would be moved.

If the change is made there would remain two districts in the

Missouri River Division of the Corps — those at Omaha and Kansas City. Until July 1, 1956, when it was consolidated with Garrison, there also was a district office at Fort Peck, Mont. Fort Peck is now an area office under Garrison District at Riverdale.

The disposition of Riverdale when no longer needed for construction has been a subject under official contemplation by the State of North Dakota and federal agencies for at least three years.



Holding a hearing in Bismarck today on the Garrison Diversion project are these four U.S. senators, members of the Senate Select committee. Left to right, they are Gale W. McGee of Wyoming,

Robert S. Kerr of Oklahoma, chairman of the committee, Thomas H. Kuchel of California, and Milton R. Young of North Dakota. It is the first of many hearings.

Witnesses Headed By Davis

A parade of North Dakota witnesses, headed by Gov. John E. Davis, unfolded the state's case for Garrison Diversion before a U.S. Senate Select committee hearing here today.

The governor, calling upon his observations on his trip with other governors to Russia last summer, told the committee that he was impressed with the strides being made there in the reclamation field.

"While I do not want to cite Russia as a criterion for our own development," Davis said, "I was nevertheless somewhat impressed by some of its accomplishments

The governor's talk was aimed chiefly at drumming up support for the Garrison Diversion project, which calls for diverting water from Garrison reservoir on the Missouri river near Cole harbor for irrigation in a 25-county area in central and eastern N.D.

With a statewide average rainfall of only 17 inches, North Dakota regards its primary water need to be for irrigation, Davis said. Use of dammed-up Missouri river water for irrigation was envisaged when Congress set in motion the Pick-Sloan plan for Missouri river development in 1944, he added.

North Dakota gave up more than half a million acres of bottomland for Missouri river reservoirs and considers Garrison Diversion a fair and honest return, the governor said. North Dakota leaders in the diversion movement have accused downriver states of dragging their feet, now that they have obtained the flood control they sought.

"What we look forward to is a chance to put a small part of the water stored in the Garrison reservoir to work," Davis said. "The Garrison Diversion unit represents North Dakota's primary interest in the Missouri river development.

"This unit is our only prospect

is another factor in the growing demand for water, Hultz noted.

State engineer Milo W. Hoisveen said orderly development of the three main water resources would provide for a 100,000 population increase in North Dakota by 1980. The three sources, he said, are the Garrison Diversion unit, ground water aquifers and storage of runoff water.

Hoisveen said if only 10 per cent of the current runoff which flows out of the state could be stored, it would provide for 170,000 people.

"There appears to be an actual national campaign attempting to convince the public that water used for irrigation is wasteful and an extravagant use of this natural resource," Hoisveen said. He added:

"Regardless of our present temporary agricultural surpluses, it is very possible that in the near future we will find there is no substitute for water when our needs for food and fiber become acute."

Hoisveen said about 96,000 acres now are being irrigated in North Dakota, much of it on a necessarily intermittent basis because of the uncertainty of stream flow.

Mrs. Daphna Nygaard, Jamestown, said an example of the need and benefits of recreation areas is the Jamestown reservoir which, although not full of water, resulted

Minot — "Much of northwestern North Dakota has less than 16 inches of precipitation a year, and as a consequence little or no water is available in streams after the snow melts. That area must look to the Garrison reservoir, the Yellowstone river and ground water sources for irrigation and other agricultural uses. The area's only other major stream is the Souris river, which eventually drains into Hudson bay."

Willis Van Heuvelen, executive officer, state health department — "In the field of municipal water supply, there is an ever-increasing demand for more adequate and satisfactory water supplies for municipalities in the state. A majority of the 150 municipal water systems, rely on wells for their supplies. . . . The development and diversion of surface waters in North Dakota will make available an adequate water supply to at least 40 municipalities which are now restricted because of inadequate supplies. . . ."

Valley Authority Program Opposed By Water Users

BISMARCK — The North Dakota Water Users Assn., at its first convention in Bismarck, put itself on record as unequivocally opposed to creation of a federal "valley authority" for governing any river basins and squarely in favor of early enactment of legislation giving individual states broader control over waters within their own boundaries.

In a resolution adopted by the association in which it opposed creation of a valley authority, for governing river basins, the group also expressed "continued confidence in existing federal agencies that have participated and are participating in the development of our river basins."

Seeking a speedy decision on the jurisdictional problem, the Water Users urged "early enactment of legislation declaring all waters in the state enumerated in Section 1 of the Reclamation Act of 1902 free for appropriations under the jurisdiction of the state, and thereafter subject to the laws of the state

Discharge Rate Will Decline

RIVERDALE — Garrison Dam and Reservoir at Midnight Tuesday went on a winter operation schedule with water discharges reduced from 20,500 cubic second feet to an average of 13,000 cfs, according to Ralph Oehler of the district hydrology section.

The reduction will cause a drop in the river level at Bismarck from one and one-half to two feet, Oehler estimated. However, he pointed out, there will be fluctuations because of low flows at night and higher ones in the daytime. The reduction was put in force because of the imminent closing of the navigation season and heavy rains in the basin downriver which reduced demands on reservoir storage.

The discharge rate will be maintained at 15,000 cfs. until about Oct. 16, when it is scheduled to go to 12,500 cfs, according to Oehler. Garrison Reservoir water elevation Wednesday was in the neighborhood of 1,800 msl.

Urged continued investigation and study of the proposed Bowman-Haley dam on the Grand river's north fork in preparation for early construction of the project.

Requested investigation and review of the possibility of a flood control and water conservation dam on the Pemola river near Walhalla for a favorable recommendation on construction of the proposed works at the earliest possible date.

Urged final surveys as to the needs for flood control and other use dams on the Sweetbriar creek tributary of the Heart river to determine the types of structures that are practical and feasible.

Applauded the interest shown by state and federal wildlife agencies in development of recreational and wildlife facilities in the chain of lakes from Turtle Lake to near Mercer and urged continued investigation of plans.

ments to the Senate committee in the state capitol here. The committee will hold 19 more hearings in 16 other states.

The Select committee, created at the last session of Congress, seeks answers to these questions:

How much water development, including dams and other projects, is needed?

When and where will it be needed?

What should be the water development plan?

What levels of cost and expenditures would be justified?

How much water will be required for specific time periods and geographic areas?

Davis said Russia appears to have made great strides in the use of water for hydroelectric and agricultural projects.

state's area and population. Irrigation will mean a turn to more livestock production, Davis told the committee, and will mean the 208,000 persons on 52,000 farms today will be increased to 244,000 on 58,000 farms.

"The development of our water resources is the key to the growth and prosperity of North Dakota," the governor said.

Dr. Fred S. Hultz, president of North Dakota Agricultural college at Fargo, also presented an answer to criticism that irrigation will add crop surpluses.

"The practice of irrigation and the feeding of livestock go hand in hand," Hultz said. He said the United States will have a population of around 220 million by 1975, which will be housed in farm-

Streak
Sealed
from the farm homes
poorly

ing gear in the last three years. It has been estimated that by 1980 it will require spending 2½ million dollars for recreational facilities in connection with North Dakota water projects to meet the needs of people.

Leo Gardner, New England — "Numerous studies have been made in southwestern North Dakota by various federal agencies and the North Dakota state water commission relative to water supplies for the future. Several reservoirs and diversion projects have been proposed. These projects must be constructed if this area is to continue to grow, and if we are to benefit from the water resources of this semi-arid country."

Otto C. Maerckle, Jr., Mott, vice president of the North Dakota Wildlife Federation — "In the development and revision of water rights legislation, the federation will insist upon recognition of recreation including fish and wildlife management, as a beneficial use of water."

waters for all beneficial uses. In other resolutions, the Water Users Assn.:

Pledged continued support and cooperation of all its members in the plans, programs and hopes of the Garrison Diversion Conservancy district.

Urged all federal agencies concerned with water development in the western states to continue and accelerate studies on methods and means of eliminating or reducing evaporation of surface bodies of water.

Opposed legislation similar to that which is before the 86th Congress to establish a national wilderness preservation system and any other wilderness legislation that would hamper or prevent any necessary land and water development in North Dakota and other western states.

Commended the Soil Conservation service for its work in assisting North Dakota farmers in development of their land for irrigation and urged that the SCS make plans to expand its services to meet the demand of farmers who will be irrigating as the rate of development of irrigation increases.

river development plan. It offered its support to the Cannonball river group in requesting a study of the practicality and feasibility of impounding waters of the river by a series of small dams.

Senate Group Hold Municipal Water Problem 'Most Urgent'

Minot Daily News 10-10-59

While a strong case for additional water supplies on many North Dakota fronts was presented to the U. S. Senate Select committee in Bismarck this week, perhaps the label "most urgent" was attached to the plight of its municipalities.

The testimony on that point clearly established the fact that the state's cities are "in trouble" now. There was no need for pro-

Second of a series.

jection of a curve into some future date when the supply and demand lines cross.

Right up against the blade, the testimony showed, are Minot, Devils Lake, Fargo and the smaller communities of Westhope and Max. Dickinson and Grand Forks are fast approaching the day of reckoning. So is Tioga.

Many others are in similar shape. The major cities and a few of the smaller ones were chosen as typical.

Witnesses for the major cities made these appeals:

Arthur J. Lanz, president of the Devils Lake City Commission, who told of the critical water needs of that city both in quality and quantity and saw the Garrison Diversion project as the only answer to water security in the future.

Mayor Maurice Harrington of Minot who pointed out that the city faces two alternatives to obtaining new water supply and added "a solution must be found immediately."

Herschel Lashkowitz, president of the Fargo City Commission, who said that city faces a \$3½ million outlay to bring water from Baldhill reservoir and who reminded the committee that there were periods—ranging up to 90 days in length during the 1930's—that the

Red river, a prime source of Fargo water, was completely dry.

Mayor Oscar Lunseth of Grand Forks who noted that city's water supply lacks stability because of the major fluctuations in supply, governed by the flow of its river source.

Robert Frank, president of

"As a result of oil development in that area the community of 800 people has experienced a considerable growth. Greater demands were placed on the water supply. Although Westhope had obtained a water right for Souris river water from the Water Commission (N.D.) in 1955, it had not received approval from the International Joint Commission. Recent action, however, by the Joint Commission relative to the Souris river makes such approval unnecessary. In order to obtain water from the Souris river, the city had to construct a pipeline to a Fish and Wildlife reservoir on the Souris river which would cross refuge land controlled by that agency."

"The Fish and Wildlife Service refused to give the city an easement to make this crossing. Westhope took the attitude that their water requirements were of utmost importance to the general health and welfare of the community and proceeded to construct a pipeline to the reservoir on the right-of-way of a county highway without the consent of the Fish and Wildlife Service," Saugstad disclosed.

He noted that the action was taken only after \$54,000 had been spent for surveys in a vain effort to obtain ground water supplies.

Saugstad also related that Tioga, that has grown from 500 to 3,000 since the discovery of oil, currently is mining close to the maximum of ground water supplies located in surveys, and faces an outlay of \$4 million to run a 20-mile pipeline to Garrison reservoir to obtain future supplies.

Mayor Harrington of Minot told of the city's choice of the \$6 million answer or the \$12 million answer to a critical water supply problem, the smaller figure representing a temporary answer through wells in the underground aquifer extending up the valley of the Souris and Des Lacs rivers and the higher figure covering a 47-mile pipeline to Garrison reser-

Aandahl Urges Missouri Basin Power Pooling

WATERTOWN, S.D. (AP) — Assistant secretary of interior, Fred Aandahl today strongly urged integration and pooling of power output in this area.

He said that with the modern trend to big hydro and big steam generating plants, required by the demands for low cost efficient power production, such integration and pooling is an economic necessity.

Aandahl was the principal speaker for the dedication of the Bureau of Reclamation's recently completed system dispatching center near Watertown. The installation is the nerve center for control of the huge power output by Missouri Basin Dams.

He said heavy transmission lines and centralized dispatching is indispensable to a pooling operation.

"The facilities that we are dedicating today, in addition to their strictly federal power marketing function, will be helpful in that purpose," he said.

"Throughout the nation, power pooling has become a common practice among utility systems, and in many instances has been employed with singular success.

"The growing complexity of our interrelated power system here in the Missouri Basin warrants a gradual movement in that direction. Some pooling has already been accomplished. Step by step, as mutually justified, more will follow."

Aandahl said that by so doing the reserve will be more effectively used and scattered components of power can be put together advantageously.

Pooling already has helped to

"In order to accomplish that purpose we have built a long electronic handle from the dispatcher's desk at this center to the water gates which control the flow to the turbines in the power plants," he said.

"Through these controls the dispatcher on duty is in control of the power generation of the system and he varies that production to meet the demands of the load on the system.

"His job is to place the generators on the river at area disposal. If one of the lines is taken out of service because of lightning, sleet, wind or some other cause he has alternate lines at his disposal through which he can supply electrical needs in correct amounts and at the right time."

Frank M. Clinton, region 6 director of the Bureau of Reclamation, described the mechanism and purpose of the dispatching center.

Also one the program were representatives of the major consumers of Missouri River power. They include Walter Harrison, president of the National Rural Electric Cooperative Assn., David A. Hamill, REA administrator, and Allan S. King, president of Northern States Power Co.

The ceremony preceded the 108th meeting of the Missouri Basin inter-agency committee which convenes Thursday in the Plateau center in Watertown. Most of the MBIAC agenda will be devoted to power.

MBIAC Hears Criticism Of Interior Department

Minot Daily News 10-15-59

WATERTOWN, S.D. (AP) — Holum said he had long been critical because of the lack of uniformity in general and the interior department in particular of being unresponsive to the public in a talk here.

Ken Holum, Aberdeen, told the Missouri Basin Inter-Agency com-

mittee that he had long been critical because of the lack of uniformity in general and the interior department in particular of being unresponsive to the public in a talk here.

Holum said the MBIAC has to outward appearances at least avoided and minimized areas of controversy while you have

who told of Dickinson's negotiations for another 900-acre feet annually from the Dickinson reservoir to meet water demands growing much faster than anticipated. The city, now 7,500 population, will outgrow the capacity of the reservoir when it reaches 9,000. When the reservoir was planned it wasn't anticipated that population figure would be reached until 1990. Now it's evident the day will be reached much sooner.

Rep. Stanley Saugstad of Ward county, chairman of the state House of Representatives Committee on Natural Resources, looked into municipal supplies in this section of the state and saw the "situation regarding the cities of Minot, Max and Westhope as most critical."

Water rationing was forced in all three during the summer, he noted.

"In June of this year the City of Westhope found itself with less than a foot of water in the ground water aquifer from which the municipal water supply was obtained," Saugstad testified.

million gallons of water per day, dependent upon normal rainfall and normal recharging.

The pipeline would offer a more permanent solution, the mayor said, but "will place a tremendous financial burden upon our citizens."

However, if the Garrison Diversion project should go through on schedule, a great new source of water would be brought to within a few miles of the city.

"If this potential source is considered, it would be possible for the city to enter into a modified well drilling program to meet its needs until the construction of such a canal became a reality. The savings to the citizens of Minot as well as the defense department (cost sharing will be asked because of the Minot Air base) will be considerable if such a solution is possible," the mayor concluded.

cent power systems. Power is imported during the winter months and returned during the navigation season when firm commitments do not use all the power produced by the hydroelectric dams.

He said the achievements were the result of cooperation. It was between the bureau, the Corps of Engineers, REA's, municipalities, a state-owned system and many investor-owned utilities.

Aandahl said the percentage of total farms electrified in South Dakota has increased in 10 years from 18.2 per cent to 86.8 per cent. In the same period, the number of rural consumers served by cooperatives has increased 440 per cent.

He said the basic purpose of the dispatching center is to regulate the production of generating plants on the mainstem of the Missouri River. It will help provide energy in dependable, usable supply for the farms, the homes and the industry in the Missouri Basin, he said.

often settled behind closed doors. Holum is executive director of the Mid-West Electric Consumer Assn. Another speaker said the navigation season was planned to start March 25 at Omaha and end between Nov. 8 and 11. However, the navigation season will end Sept. 22 in event of adverse water supply conditions which have prevailed in recent years.

Without saying so, Holum advocated a central control of Missouri water management. He noted the present divided authority has, in general, given the Army responsibility for flood control and navigation, and the interior department irrigation and power management.

"Divided authority can succeed only if and when both parties prosecute their responsibility with equal vigor," Holum said.

"We do not criticize the Corps of Engineers for representing their interests diligently so long as Congress permits this type of management. We do criticize the Department of Interior for failing to be as vigorous."

"In the meantime, areas of disagreement have been ignored or settlements reached behind closed doors."

He said, "you are unwilling to face controversy in public, hear the various points of view and arrive at decisions with the public and press in attendance."

Holum asked that the MBIAC policy forming group for Missouri development, at a future meeting publicly debate the priority use for water.

An Army Engineers' report said the Gavins Point pool will be lowered to the flood season levels by mid-March in 1960, about three weeks earlier than in 1959. The plan is in response to a request to enhance spawning conditions for certain species of fish.

Experimenters released from Garrison reservoir the observation of effects of flows higher than 15,000 cubic feet per second on ice conditions may be made, if conditions permit. That will be sometime in January or February.

Senators Minot Daily News Appear 10-7-59 'Sold'

By JACK BONE

BISMARCK—It appeared today that four senators listening to North Dakota's case for its Garrison Diversion project didn't have to be sold on its merits.

Sen. Robert S. Kerr, chairman of the Senate Select committee, made that clear.

In advance of the first of a series of hearings planned by the committee from one end of the nation to the other—Florida to Oregon—the senator said there is no question at all about the need for further reclamation development in the nation. The question is one of priorities or rather of greatest urgencies, he indicated.

With three other senators who are members of the committee—Thomas Kuchel of California, Gale W. McGee of Wyoming and Milton R. Young of North Dakota—Kerr brought down the gavel this morning that started a parade of North Dakota witnesses hoping to get the Diversion project high on that priority list.

Sen. Kerr in appraising the tremendous job ahead for the committee in weighing the demands for water practically everywhere in the nation, pointed out that today's demands are only a minor fore-runner of what is to come. He predicted that in 40 years the nation's demands for water will be four times as great as they are being utilized today.

He brought out that point as principal speaker at the first annual banquet meeting of the North Dakota Water Users Assn. Tuesday evening.

Sen. Kuchel, also addressing the dinner meeting, told the group un-

mediate future. The senator called the North Dakota program "one of the greatest bargains in the history of the nation," saying that it calls for the type of imagination used in the acquisition of Alaska and Louisiana Purchase.

He predicted the nation's population would double in the next 40 years and that the per capita need for water also would double in that same period.

The areas that will grow, he said, will be those with abundant supplies of water and low cost energy fuel. With Garrison reservoir and the vast supplies of lignite in the state, North Dakota should be in an enviable position to capitalize on its growth potential.

Addressing the dinner meeting briefly, Gov. John E. Davis told the group, "obviously we are among friends."

He also read a telegram from the Mississippi Valley Assn., in which that group pledged its support to North Dakota in realizing the Garrison Diversion project and other phases of its water program.

The nation's growing population with the accompanying growing appetite was stressed again and again by speakers at Tuesday afternoon's session of the North Dakota Water Users Assn. held in the city auditorium here.

Congressman Quentin Burdick brought it out in his address when he said the nation is adding people at the rate of a quarter million every month. That growth, plus the annual loss of acres to farming caused by growing metropolitan areas and other factors would soon make it necessary for the nation to utilize to its fullest every acre of available tillable land. To use much of the land properly, he said, requires water.

Yet, he added, in the states west of the Mississippi only one-third of the water in the river basins is utilized in water development projects. The other two-thirds still is flowing to the sea without any use being made of it. In the East the record is even worse, seven-tenths of the water in rivers not four times as great as they are being utilized today.

He said he envisioned the day not too far hence when "continuous cities" would exist on both the east and west coasts, requiring vast water and food supplies.

Congressman Burdick said he believes the House would pass au-

that the project ultimately will be realized.

"It is just a matter of time, provided we keep working hard enough. There is no doubt that it is a good project," he added.

Short, who discussed the nation's agricultural problems, said one of the complicating factors in fighting the wheat surplus was the fact that the average per bushel yield in the nation in 1938 was 12½ bushels to the acre while last year it was 27½ bushels.

He said it was time "to take a long look" at pegged farm prices, but added that the change could not come abruptly because of the hardships it would bring in countless cases.

He saw a great potential in North Dakota for a switch from crops in surplus to a livestock feeding program which in many cases would bring greater returns per acre. This transition, in keeping with the nation's appetite, could be speeded with irrigation coming from the diversion project, he said.

N. D. Bids For \$902,392,000 Water Project Outlay By 1980

Minot Daily News 10-8-59

By JACK BONE

In 10,000 well chosen words—plus exhibits, tables, maps and appendices—North Dakota has dumped in the lap of a U.S. Senate Select committee its case for a \$902,392,000 program for water development between now and the year 1980.

The estimated figure, arrived at by Milo Hoisveen, state engineer and secretary of the North Dakota Water Conservation committee, covers all projects, big and small for irrigation, municipal and industrial water, power, flood control and pollution control that are needed to bring supply and demand into balance.

The figure failed to shock the four members of the Senate committee who sat in on the hearing in Bismarck Wednesday, the first of a series to be held in 17 states seeking to get a national picture of water needs.

When the hearing was adjourned after four hours of testimony was completed, and many additional

000; Soil Conservation Service, \$39,850,000; U.S. Wildlife Service, \$10,250,000; and state and local contributions, \$114,050,000.

The total does not include an estimated \$17.5 million required for planning, investigation and surtimated required outlay of \$2.5 million to fill recreational needs which, Hoisveen said, would be provided by the various construction agencies.

While North Dakota laid its entire case on the line for projects both large and small, its major pitch to the committee was for the Garrison Diversion project. Evidence was brought in to show how the Diversion job would solve many water problems for the state—in providing badly needed municipal and industrial water supplies, in restoring Devils Lake, in providing needed recreational facilities, in overcoming pollution problems.

But, most of all, it was brought out to provide irrigation that

Gov. John E. Davis pushed the case for a yearly start on the Diversion project, telling committee members: "As you are aware, once a river development is started, everyone profits from rapid completion. Delays and postponements cost money and defer benefits. Our potential irrigators have long anticipated that the start of construction on the Garrison Diversion unit would be in fiscal year 1963. We are hopeful this target date will be met."

In all, 28 witnesses appeared, unfolding a story of water needs from one end of the state to the other. Some of the data they presented will be covered in a series of articles to appear on subsequent days in The News.

He said he favored a good sound water program that would "bring opportunities to our grandchildren," and that the Garrison diversion project would do a great job for the nation.

Sen. Kerr, calling for a bipartisan support of water development, pointed out that if any issue aside from defense of the country should be emphasized, it should be development of water resources.

He said he had flown over areas on his way to North Dakota where there were floodwaters six inches to many feet deep in a year when North Dakota had suffered its most severe drought since 1936.

"It just doesn't make sense," Sen. Kerr told the audience.

Water conservation is further vital because the United States is entering an industrial development program "beyond the imagination of anyone in this room," Kerr said.

He said \$308 million already had been spent by the federal government developing North Dakota water resources and an additional

able report on it came out of the Bureau of the Budget. There was a good chance of passage, he said, even if the report were non-committal, but if an unfavorable report were forthcoming, "I doubt if it would pass the House."

Burdick said getting support in Congress for the Diversion project involved making friends with representatives in other states also interested in similar projects.

In defending his vote to override the President's veto on the water projects' appropriations—the President objecting because of the "new starts" the bill provided for, Congressman Burdick quoted Rep. Wayne N. Aspinall, chairman of the House Insular and Interior Affairs committee as saying:

"There is no point in authorizing projects if we can't build them."

Congressman Don L. Short said he had "tried as hard as I know how" to convince his colleagues of the vital importance of the diversion project and of the fact that it was "part of the package" of the Flood Control Act of 1944.

homa, chairman of the committee, said:

"It was the most impressive demonstration of the awareness and interest in a problem of greatest significance. We hope that the evidence accumulated in other hearings to follow will be of the same kind and quality we received here. Your problem is typical of the growing pains being felt everywhere in the country and the testimony was of great benefit to us."

Sen. Gale W. McGee of Wyoming felt North Dakota had "ably presented an excellent case," and Sen. Thomas H. Kuchel of California said the hearing had made him acutely aware of the fact that North Dakota's water problems are "like ours in California," adding: "They can be solved by people working together."

In arriving at this total, Hoisveen broke down the estimated amounts that would be contributed by various agencies as follows:

Bureau of Reclamation, \$637,242,000; Corps of Engineers, \$101,000,

ance."

In that regard, Hoisveen's statement attacked what "appears to be an actual national campaign attempting to convince the public that water used for irrigation is wasteful and an extravagant use of this natural resource."

He went on: "In this period of some temporary agricultural surpluses, such philosophy gains many supporters and it behoves irrigators, industry and all of us to exercise the best water conservation practices possible. For example, we often hear statements that it requires 65,000 gallons of water to process a ton of steel. One steel manufacturer who has been confronted with a water shortage has reduced his requirements for processing to 1,600 gallons per ton by recirculating and re-using the cooling water as much as 40 times. Regardless of our present temporary agricultural surpluses, it is very possible that in the near future we will find that there is no substitute for water when our needs for food and fiber become acute."

State Envisions Irrigation 1,559,000 Acres By Year 2,025

Editor's Note: A valuable compilation of data on North Dakota's needs for water in the present and future, as well as steps that have been taken to meet those needs, was presented in papers filed with the U.S. Senate Select committee in Bismarck this week. Some of the material offered is being presented in coming days in a series of articles in The News.

A timetable for North Dakota formulated by the North Dakota Water Conservation commission and presented to the U. S. Senate Select committee calls for 1,559,000 acres to be under irrigation by the year 2,025.

The key to that figure, of course, involves a steady, uninterrupted development of the Garrison Diversion project.

But even without that project, some 652,000 acres will be in irrigation, according to the figures compiled by W. Hoisveen, secretary of the water commission.

In the table submitted to the Senate committee, Hoisveen estimates that the first 6,000 acres will be under irrigation as part of the Garrison Diversion project in the year 1970. By 1980, the total will have grown to 211,000

acres; by the year 2,000 to 615,000 acres; and by 2,025 to 1,007,000 acres.

The table also looks backward to the year 1950, when 72,000 acres was under irrigation in the state, 35,000 of that total represented by projects on individual farms and the balance in small group projects.

By this year, the total had climbed to 100,000 acres, of which 56,000 was in individual projects and the balance in group projects.

Those projects are expected to climb, until by 2,025, 302,000 acres will be served by individual projects and 350,000 by group projects.

In his testimony before the committee Hoisveen pointed out that a considerable portion of current irrigation is being conducted on a

annual precipitation of 17.11 inches escapes in the form of runoff and leaves the state. This averages 2 1/2 billion gallons of runoff per day. Such runoff and the intermittent nature of our streams make necessary the impounding of precipitation for regulated use.

"If only 10 per cent of the water were impounded it would provide us with storage capabilities which could be made available for public consumption at the rate of 250 million gallons per day. Such stored water would be sufficient for 170,000 people based on the national water use average."

Ground water also will be called upon to make a further contribution to the state's supply, Hoisveen said.

The commission has estimated that throughout North Dakota these supplies may provide another 250 million gallons of water daily.

"This would support an additional 166,000 people based on our national average per capita consumption of 1,500 gallons per day," he said. (The per capita figure includes the combined use of water in homes and high water consuming industry.)

To find this supply of underground water, the last session of the legislature voted \$50,000 a year which will be matched with federal funds.

"This will provide us an opportunity to catalog approximately 50 per cent of the ground water in the state by 1960," Hoisveen said.

Low Heart River Bid \$252,267

RIVERDALE (AP)—Fargo and Kansas City contracting concerns submitted the lowest of 11 bids for two schedules involved in the Lower Heart river flood protection project south of Mandan, the Corps of Army Engineers announced.

Schultz & Lindsay, Fargo, bid \$252,267.40 on the unit below Mandan. The William A. Smith Contracting Co., Inc., Kansas City, Mo., entered a bid of \$22,922 on the Sunny unit of the project.

The government estimate on the unit below Mandan was \$274,932.16, and for the Sunny schedule upstream from Mandan was \$23,932.16.

The project consists of building dikes and other works for protection of the Mandan vicinity from flood waters of the Heart, a Missouri tributary. Deadline for work completion is Nov. 1, 1960.

Other recent action of Army engineers at Garrison district headquarters here:

Awarded a \$20,135 contract for building Garrison reservoir access roads in the Tobacco Garden creek area south of Williston to Frank E. Olson of Williston. Work completion is specified for June 15, 1960.

Issued bid invitations for Lewis and Clark roads and Buford-Trenton irrigation project bank stabilization work, in the Williston vicinity.

Awarded an \$11,350 contract to Brown-Beverly Corp., New York, for switchyard steel and equipment for second power plant at Fort Peck dam, Mont.

Awarded an \$18,025 contract for Yellowstone river bank protection work at Billings, Mont., to F. L. Flynn Co., Billings. Completion deadline is November, 1959.

Awarded a \$32,364.72 contract for

Bad Weather Forces Early Departure

Bismarck Tribune

10-9-59

By BILL TILLOTSON

Tribune Staff Writer

The Senate select committee on natural resources which collected data on North Dakota water uses and needs Wednesday cut short its stay here because of threatening flying weather.

Sen. Robert S. Kerr (D-Okla), select committee chairman, and his colleagues left Bismarck by military aircraft at 1:30 p.m. Wednesday bound for Laramie, Wyo.

With Kerr for a series of 19 hearings around the nation on water problems were Sens. Thomas H. Kuchel (R-Calif), Gale W. McGee (D-Wyo) and Milton R. Young (R-ND).

THE FIRST of the hearings were held in Bismarck Wednesday. About 200 witnesses and spectators were on hand in the House Chambers in the State Capitol for the hearing.

Kerr said the committee would have liked to ride out the bad weather and stay in Bismarck overnight. However, he said he was advised that flying weather west of Bismarck probably would be worse by Thursday morning.

The committee had planned to leave Bismarck at about 4 p.m. Wednesday to make Laramie by Wednesday evening.

The select committee heard from 21 witnesses during the Wednesday hearing and received statements for the record from a number of others.

ONE OF THE witnesses, Milo W. Hoisveen, state engineer and secretary of the State Water Conservation Commission, suggested an improvement in cooperation between state and federal agencies in water development in North Dakota.

Kerr said the first hearing well

• Will adequately safeguard all water rights established under state laws against the federal agencies and their licensees.

"Some projects have been promoted at a local level by representatives of a federal agency without contacting the appropriate state agency," Hoisveen said.

"In at least one instance a study report was not submitted for public inspection when a review by the sponsoring citizens was much desired," the state engineer told the committee. "The flood conditions that may occur from this omission might conceivably result in a major catastrophe."

Hoisveen later told a reporter he was referring to a dam on the Souris River north of Minot constructed several years ago by the U.S. Biological Survey, now a part of the U.S. Fish and Wildlife Service.

HE SAID THAT the dam was constructed without sufficient capacity to hold back possible peak water amounts in the area.

The Corps of Engineers should reconstruct the dam to proper specifications, Hoisveen suggested.

Hoisveen told the committee that records compiled through the cooperation of the Hydrographic Branch of the U.S. Geological Survey showed that the Missouri River was North Dakota's only reliable source of surface water.

"They show that all other streams in the state, at one time or another, have practically no flow," he said.

The senators heard about North Dakota water problems including not only Garrison Diversion, but also problems involving municipal water supplies, and individual areas served by rivers other than the Missouri.

THE TOURING senators expressed satisfaction with the start of a group of hearings which will spread to all regions.

Kerr said the first hearing well

are intermittent in flow. Supplemental water in the amount of 45,000 acre feet is needed for this acreage, he said.

He added, however: "Even with a limited water supply these areas are added materially by the partial irrigation possible because it provides ranchers an opportunity to produce some feed to hold over foundation stock during drouth periods. Most of these projects have been financed with private capital and represent a considerable investment on the part of the individual."

To provide the water for the projects independent of Garrison Diversion) as well as to meet other needs, Holsveen sees the need of further impoundments.

On that point, he testified: "Three-fourths of an inch of our

power plant to Central
Co., Bismarck. Delivery deadline
is May 1, 1960.

improvement, says Holsveen said.
"One such improvement concerns preliminary planning," Holsveen said.
He said much water development information is available within the state but that on occasions federal agencies make investigations without an effort to obtain data at the state level.
"This adds to the cost of the investigations," Holsveen said.
He said immediate federal legislation is needed that:
• will clearly state that the federal government shall not be deemed to have or acquire any water rights as a result of the reservation or withdrawal of public land;
• will require compliance with state water laws by all federal agencies, licensees or project beneficiaries; and

North Dakota but in the entire nation.
The first witness called Wednesday was Gov. John E. Davis, who told the committee, "Studies made by the North Dakota Agricultural College show that North Dakota's greatest benefit from the proposed Garrison Diversion Unit will come from the expanded livestock enterprise that will develop."
Davis said that with irrigation, stable feed supplies will be available to sustain beef, dairy cattle, hogs and sheep.
"NORTH DAKOTA'S stockmen will become the source of feeder cattle and feeder lambs for farmers in the irrigation project," Davis said.
Davis said that in North Dakota the Missouri River had been tamed and controlled by the Garrison Reservoir and that part of the project is virtually completed.
"What we now look forward to is a chance to put a small part of the water stored in the Garrison Reservoir to work," Davis said.

Sales Ring Loses Bid To Keep Road

The Williston Sales Ring's bid to save its most convenient access road failed in federal court at Minot Wednesday when Judge George Register, Bismarck, ruled the organization had no case.

An agreement between the Corps of Engineers and the Great Northern Railroad calls for closing of the old underpass leading to the Sales Ring to make way for a protective dike for the railroad in keeping with the Garrison project.

Construction of a new overpass bridge and road to the north of the old underpass has been completed. Use of this road will make the distance to the Sales Ring one and a half miles further than the old road.

Ring officials object to the additional mileage as a deterrent to business, and the fact of traffic by-passing the ring.

Delmar Scott, Trenton, a director of the Sales Ring Board, said the board feels that use of the new road would be detrimental to business because the Ring can't be seen from the road.

"It's like having your store windows boarded up so customers can't see your goods when they pass," he said.

Scott said the firm will consult with its attorney, Milton Higgins of Bismarck, within the next few days to determine its next move. Possibility of the Sales Ring having to be moved from its present location due to low elevation in view of a rising Garrison reservoir has also been discussed, Scott said.

"There's a possibility we might seek assistance from the Corps of Engineers in getting a new location. However, that will be up to our attorney and we will follow his advice," the director added.

More Than 300,000 Visit Garrison Dam

Williston Herald
RIVERDALE, N. D. — For the second consecutive year visitors at Garrison Dam have exceeded 300,000.

The Army Engineers said 301,412 persons stopped to visit the project through Sept. 30. Last year the total was 335,000 for January through December.

Daily guided tours of the project ended early in September. Since then only one guide has conducted tours, on weekends. The weekend tour program ends with this weekend.

Power Consumers Assured of Supply

Bismarck Tribune

10-16-59

WATERTOWN, S.D. — A Bureau of Reclamation official here for the Missouri Basin Inter-Agency Committee meeting assured hydro power consumers an ample supply during the coming winter.

George A. Lewis, chief of power resources and development, also gave the target dates for various reclamation projects in the Missouri Basin.

He said it would be necessary to import 70 to 80 million kilowatt hours of electricity in the mid-November, mid-March period when

power consumption is greatest. The importing is necessary because of the continuing poorer-than-average runoff in the upper basin.

Here are some of the target dates announced by Lewis in a paper prepared for the MBIAC:

Oahe powerplant—First power on the line in July, 1962, with six additional 85,000-kilowatt units following at four-month intervals.

Garrison powerplant — Fourth 80,000-kilowatt unit next January, and fifth unit next July, although construction progress may permit somewhat earlier completion.

Fort Peck—First of two additional 40,000-kilowatt generating units to go into service March, 1961, and the second June, 1961.

Big Bend powerplant—First power on the line due in July, 1964, with seven 58,500-kilowatt units following at three-month intervals for a total of 468,000-kilowatts.

Fargo-Granite Falls 230-KV line—into service in September, 1960.

Fort Peck - Glendive - Bismarck 230-KV line—Scheduled for service in December, 1960.

Illica Junction-Stour Falls 230-

Garrison Gain in Water Storage Seen

Minot Daily News 10-16-59

By JACK BONE

WATERTOWN, S. D.—A prediction that Garrison reservoir would make a gain of 5 million acre feet of water storage during 1960 was made at a meeting of the Missouri Basin Inter-Agency committee here Thursday.

The forecast was made by R. J. Pafford, Corps of Engineers representative and secretary of the Reservoir Control Center at Omaha, Neb.

Pafford said the prediction was based on a normal runoff above Garrison reservoir, something that has not occurred in any of the last six years that the reservoir has been in operation but exceeded in each of the five years before that.

If a normal runoff year is forth-

coming, storage in the Missouri river basin will increase to 30 million acre feet in 1960, Pafford said, compared to 23 million this year. Despite runoff considerably below normal, this year's storage is up two million acre feet. Storage of 60 million acre feet should be achieved by 1965, he said.

If the anticipated gain comes next year, it will largely be stored in the two upstream reservoirs. A gain of one to two million acre feet is anticipated at Fort Peck.

Pafford said operating schedules for the main stem reservoirs for the ensuing year were set up at a meeting of the control unit on Sept. 17 and 18 at which all affected agencies were represented.

The schedule was adopted unanimously, but after "heated" discussion, Pafford said. Two preliminary meetings were held before the final session, one on April 30 to which all interested parties were invited to testify and then a "detailed technical meeting" on May 1.

In answer to a question, Pafford said irrigation retains its priority for water over all other uses of water in the basin, as originally established in the Flood Control Act of 1944.

However, in actual working operations for the year ahead, it was obvious from his report that other factors are getting consideration. One change that will be made is a step-up of flows from Garrison through downstream reservoirs and into the river channel during the months of February and March. Pafford said the extra releases are planned as an experiment in flushing down the river channel and giving extra water to Kansas City for sewage dilution. Missouri has complained, Pafford said, that winter releases of 9,000 cubic feet a second are not sufficient to handle the sewage load from Kansas City resulting in an odor problem downstream.

He also said the return of normal flows in the basin, if forthcoming, might make it possible to extend the irrigation season.

ed from Page 1
a sec maintain navigation at
Omaha 35,000 second feet at
Kansas City.

Other facts revealed by Pafford: Power output on the main stem reservoir set a record in 1959. And of the 3.8 billion kilowatt hours of power produced, 60 per cent was firm power.

A million acre feet of storage was lost to evaporation in 1959.

A new record also was set in navigation with 700,000 tons being shipped on the river between Kansas City and Omaha, up 300,000 tons from a year ago and three times the volume in 1953.

Fred G. Aandahl, assistant secretary of Interior, made an unscheduled talk at the meeting to defend his department and the Inter Agency committee from blasts leveled by Ken Holm, Aberdeen, S.D., executive director of the Midwest Electric Consumers Assn.

Holm charged that the MBIAC lacks "unified, responsive and responsible management in the Missouri basin," and that the department of Interior had not pushed the case for power with the same vigor that the Corps of Engineers had represented the case for navigation.

Aandahl said the power capabilities of the basin program are a "growing process" and must be approached with caution, but added "we are finding the answers as rapidly as is physically possible."

He said ways are being studied to put power blocks together to assure the maximum of firm power and said surveys are continually being made in an effort to determine and meet power demands.

Noting that the Bureau of Reclamation had built power loops as early as 1949, three years in advance of the production of Garrison power, Aandahl said that was hardly an example of lack of responsiveness to power demands.

Aandahl said his own North Dakota farm first got REA power in 1942, long before hydroelectric power was being produced by Garrison dam. He cited his own case as an example of "local responsibility" on the part of REA co-ops and said he was opposed to "paternalism" by the federal government in that program.

Missouri Traffic Rising; Full Use Seen After 1967

10-22-59

Bismarck Tribune

KANSAS CITY, Kan. (AP)—The Missouri River Basin Research and Development Council was told today Missouri River traffic

the city commission who attended yesterday's hearing said, "We have to go along with the judge's decision whether we like it or not. The federal government's decision is first, above everything else. I feel there is no harm done, it's just a matter of going around and it will all work out for the interest of everyone."

Chamber of Commerce manager, Ray David, who also attended the hearing, said he felt strongly that closing of the old underpass will do great harm to the Williston Sales Ring, and added, "It's too bad things like this have to happen. However, in major construction like the Garrison project someone is inevitably harmed. At least we have the satisfaction of trying to do what we could."

Clarence Meyer, Sales Ring manager said today the public would be encouraged to use the old road as long as possible. Closure time for the old underpass could be this fall or next spring as far as he knew, Meyer said.

until after 1967.

Charles A. Cocks, Omaha, planning section chief for the Army Engineers, reported the traffic had gone from 152,000 tons in 1953 to 596,116 tons in 1958.

He said the engineers do not expect to complete programmed stabilization projects until 1967. Under this program the stream is being stabilized into a controlled nine-foot channel designed to scour itself, he explained.

J. Slaten Jenner, manager of the economics division of the Midwest Research Institute, Kansas City, said "proper development of the Missouri River could be the strong and single stimulant for a more rapid economic and industrial development in Kansas City and other areas of the basin."

Jenner said maximum development of the Missouri Valley's potential had been retarded in the past by conflict of interests in the various states. He urged that various interests submerge their differences and work as a unit for the benefit of all.

line—Scheduled for tower construction award in July, 1960, and completion of conductor stringing by October, 1962.

Jamestown-Fargo 230-KV line No. 2—Tower contract award in April, 1960, and completion by January, 1962.

Jamestown-Grand Forks 115-KV line—Construction award in July, 1960, and completion in October, 1961.

Garrison - Minot - Rugby 115-KV line—Scheduled for award in May, 1960, and completion in October, 1961.

Oahe-Fort Thompson 230-KV, line No. 3—Tower contract award in March, 1960, and completion in early 1962.

Iowa lines—Two 161-KV. lines Sioux City to Spencer and Sioux City to Creston to be put under construction as soon as funds are available.

necessary in the past to limit it to 6½ or 7 months because of inadequacy of flows.

However, during 1958, heavy precipitation downstream helped maintain navigation supplies, thus reducing demands from the reservoirs. This downstream precipitation saved better than a million acre feet of storage, he estimated. It takes a flow of 25,000 cubic feet

See WATER—Page 7

4.6 million kilowatts more power will be needed in the basin by 1972.

Hill told the MBIAC that the installations will require an expenditure of 700 million dollars for thermal generating capacity, alone.

He said studies have shown that substantial benefits, in terms of cost savings, adequacy of power, and continuity of service are to be gained from a pooled operation of the generating and transmission facilities of the area.

Hill estimated that the construction savings would amount to \$110 million in pooled operation. He also declared that the studies indicate that 10 million a year could be saved in operating costs by such a program.

The MBIAC will hold its 109th meeting Dec. 17 at Atchison, Kan., and its 110th meeting Feb. 18 at Lincoln, Neb.

Gov. John Davis of North Dakota, chairman of the Missouri River States committee, an auxiliary group, announced the governors of the 10 basin states will meet Dec. 16 at Atchison.

Garrison Report Predicted in Congress by 1st of Year

Bismarck Tribune 10-16-59

JAMESTOWN (N) — The Board of directors of the Garrison Diversion Conservancy District, meeting here Thursday, heard a report from E. A. Rising, the district's Washington representative, that the report on the Garrison

diversion project would be forwarded by the Bureau of the Budget so as to reach Congress before Jan. 1, 1960. The budget report is expected to endorse the project to the extent of 250,000 acres, according to Rising. The original Bureau of Reclamation report on the project proposed the ultimate development of over one million acres of irrigation in central and eastern North Dakota, with a first stage of 407,000 acres.

In the plan, the irrigation water will be conveyed from the Garrison Reservoir through a vast series of canals to the irrigable lands.

Other discussions among the 25-member board centered around plans for congressional hearings on the project during the next session of Congress.

Rep. Quentin Burdick (D-ND), was scheduled to discuss the possibility of hearings in the House Interior Committee, of which he is a member, later in the day.

Other business included reports on the progress of contract negotiations between the district and the Bureau of Reclamation; arrangements to employ a consultant to advise the district in negotiating contracts; plans for the continuation of the educational program of the conservancy district and a report on the operations of development farms.

Roy A. Holand, LaMoure, is chairman of the board.

Editorials

Bismarck Tribune 10-17-59

Garrison District Office Needed

For some time it has been rumored that the U. S. Army Corps of Engineers is considering elimination of the Garrison district office at Riverdale.

This is a move which should be resisted with every ounce of effort that can be brought to bear by upstream states, and particularly North Dakota, as inimical not only to upstream interests but to the best interests of the Corps.

Loss of the "industry" that the Riverdale district office represents would, of course, be a blow to this part of North Dakota. To lose 50 jobs would hurt.

The Corps has brought some excellent citizens to the state and it would not be nice to lose them.

But this is not the most important consideration.

Elimination of the Garrison District would mean that there would be no representative of authority, and no engineer's office, north of Omaha, which would amount to all but total divorcement of the

is close to the river navigation which is so important to it. But it is far from the other beneficial uses of water, such as irrigation, which it is committed to serve through such installations as Garrison Dam.

If there were any real reason to believe that substantial — or even any — savings were to be made by such a "consolidation," it would be difficult to oppose. But the strong chance is that, despite expected avowals to the contrary, such consolidation would achieve only book savings, if that. Higher travel and other costs would probably more than offset any claimed economies.

Rather than eliminating the Garrison District office, the Corps would do well to strengthen it and make better use of it through enlargement of its responsibilities, say by adding to its territory that part of North Dakota now served by the St. Paul office and by farming out to it work which is now

Some Temporary Homes Being Sold At Riverdale

McLean Co. (ND) Independent

10-22-59

Twenty-seven temporary houses in Riverdale have been declared surplus by the Corps of Engineers and are being screened through other Government agencies for takers.

If they are not wanted by the Department of Health, Education and Welfare, or other U. S. agencies, they will be put up for public sale. Along with the homes, located on Eighth Street, five garages will be sold.

Last spring 17 living units located on Ninth Street in Riverdale were sold, most of them going to the University of North Dakota. Last summer one of the huge H-shaped dormitories was sold to Father Lawrence Talty of Donnybrook who is moving it to his Dominic Savio camp for boys being established on the shore of Garrison Reservoir north of Pick City.

The building was cut into five sections which are being moved by truck to the campsite. Father Talty formerly operated his camp at Lake Metigoshe.

Other Government buildings up for sale at Riverdale are a garage and another dormitory building. Bids will be opened at the Engineers' offices here October 22.

Surplus also and up for sale are several sets of farm buildings in the Williston vicinity. Riverdale's population at the last census taken early this month was 1275, living in 406 homes. Ninety of the homes are of the permanent variety.

Low Bidders Told On Flood Project South of Mandan

Bismarck Tribune 10-16-59

Says Public Ignored

Bismarck Tribune

10-16-59

WATERTOWN, S.D. (M) — A South Dakotan Thursday accused federal agencies in general and the Interior Department in particular of being unresponsive to the public in a talk here.

Ken Holm, Aberdeen, told the Missouri Basin Inter-Agency Committee at its 108th meeting that matters of controversy were too often settled behind closed doors. Holm is executive director of the Mid-West Electric Consumer Assn.

Another speaker said the navigation season was planned to start March 25 at Omaha and end between Nov. 8 and 11. However, the navigation season ended Sept. 22 in event of adverse water supply conditions which have prevailed in recent years.

WITHOUT SAYING so, Holm advocated a central control of Missouri water management. He noted the present divided authority has, in general, given the Army responsibility for flood control and navigation and the Interior Department irrigation and power management.

"Divided authority can succeed only if and when both parties prosecute their responsibility with equal vigor," Holm said.

"We do not criticize the Corps of Engineers for representing their interests diligently so long as Congress permits this type of management. We do criticize the Department of Interior for failing to be as vigorous."

Holm said he had long been critical because of the lack of unified, responsive and responsible management of the basin.

HOLM SAID the MBIAC "has to outward appearances at least, avoided and minimized areas of controversy while you have listened to a long series of papers of little controversy and of local interest."

Missouri Basin.

It would very probably mean even more substantial domination of the basin by downstream influences than exists now, since the Corps would have no direct and daily connection with the people and the interests of the upper basin area.

Yet most of the Missouri River stretches not only above Omaha but even above Bismarck and Garrison. Transfer of the Garrison District's responsibilities to the Omaha district would give that district responsibility for the river way out to Three Forks, Mont., and beyond.

At Omaha, of course, the Corps

The facilities for a district office, and personnel to man it, are present now at Riverdale. To not use them will be to waste them.

Unless the Upper Basin, and its interests, want to be lost in the impersonal and disinterested bureaucracy of a district office unfamiliar with its wants and its needs and its people—unfamiliar except insofar as hasty "inspection" trips by plane can make for familiarity—the talked-of move should be resisted and defeated. The Corps itself, if it really wants efficiency and economy and places any value upon public relations and public support, should discard the idea now.

submitted the lowest of 11 bids for two schedules involved in the Lower Heart River flood protection project south of Mandan, the Corps of Army Engineers announced.

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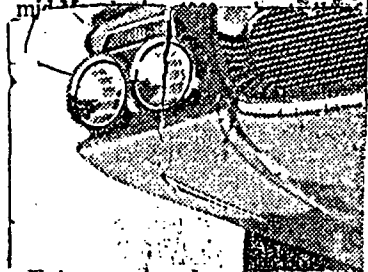
- Awarded a \$32,364.72 contract for other switchyard steel and equipment for the second Fort Peck power plant to General Electric Co., Bismarck. Delivery deadline is May 1, 1960.

agreement have been ignored or settlements reached behind closed doors."

He said, "You must be willing to face controversy in public, hear the various points of view and arrive at decisions with the public and press in attendance."

Holum asked that the MBIAC policy forming group for Missouri development at a future meeting publicly debate the priority use for water.

AN ARMY engineers' report said the Gavins Point pool will be lowered to the flood season levels by mid-



Missouri Basin Program for 1960

Lists One New Project Start

Billings Gazette 11-15-59

Fiscal 1960 will be a completion and planning year for Missouri basin activities, according to the year's program outlined in the quarterly report of the Department of Interior.

Only one project will start during the year in Region 6, the controversial East Bench unit on the Beaverhead River near Dillon which escaped the ban on new starts after a bitter congressional battle early in the year.

Construction plans for relocating the Union Pacific Railroad in the reservoir area call for a contract to be let late in the year, according to the report.

Investigations Continue

Investigations continue into other projects which have not been "firmed up," including a small sum set aside for contacting Powder River area residents who have indicated interest in basin development.

Construction progress was marked by completion of Spokane Bench laterals in the Helena Valley unit, while moving ahead of schedule on north and east side laterals.

In the same unit a contract was let early in the quarter and work started on rehabilitating outlets from Shermune Lake Dam. Investigations also were started into methods of sealing Helena Valley reservoir against seepage.

Towers March

Near Fort Peck, steel towers marched across country waiting stringing of wire to complete the 30 KV Fort Peck-Dawson County-Bismarck transmission line.

Another transmission line, the Fargo-Granite Falls 230 KV line, was carrying wire ahead of schedule while another, the Bismarck-Bismarcktown 230 KV No. 2, is considerably behind schedule.

A contract for Anchor Dam and its access roads in the Owl Creek unit in Wyoming has been extended another year. Approximately three-quarters of the job is completed.

On the Glendo unit of Wyoming, construction of Fremont Canyon

Included in these excavations were a number of sites in the area soon to be flooded by Oahe reservoir in South Dakota.

Special emphasis was placed on a rectangular house culture underlying previously uncovered circular earth lodges.

North of Mobridge, S.D., a rectangular house site beneath three circular lodge sites revealed an entire sequence of fortifications and defensive structures with "strong points."

Temporary Repairs

Elsewhere the park service reported that temporary repairs have been made on all Yellowstone Park roads damaged by the Montana earthquake Aug. 17. Permanent repairs will be completed early in 1960.

The quake did little damage to Yellowstone Park buildings, the service stated. However, the area has been redesignated a quake zone and the building code modified with that in view.

The quake had only minor effects on thermal activities in the park although Fountain Paint Pot and a number of smaller geysers and springs have become more active, according to the report.

A special geophysical team will visit the park in 1960 to observe thermal activities and record notable changes.

Power should be available to all developed areas of Yellowstone Park early in 1960, according to progress data of the Montana Power Co. contained in the report.

In addition the park service is continuing a series of surveys into land use for recreational facilities and improving lands near reservoirs for recreation.

Effect Studied

At the same time the Bureau of Sport Fisheries and Wildlife continues a study into the effect Missouri Basin projects have or will have on fish and game.

According to the report, the first quarter of fiscal 1960 was uneventful with the exception of the change in fishing conditions in the Madison Valley caused by

Mineral surveys by the Bureau of Mines on four proposed dam sites, Mission, Yankee Jim, Emigrant and Lower Canyon on the Yellowstone River, near Livingston, are planned following preliminary investigations by the Bureau of Reclamation.

During the first quarter the Bureau of Mines completed two projects on the storage and size reduction of lignite and continued others on freezeproofing and pressure gasification of the mineral.

Data collection for reports on the petroleum and natural gas in the area continued with one report "Petroleum and Natural Gas Fields in Wyoming" due for publication soon.

Seepage Investigated

Testing and investigation of water seepage from dams and canals is under way in a number of areas with special emphasis on lining materials that will prevent water loss.

A mineral exploration contract was let, according to the report, to Baltimore Syndicate, Ltd., for

a lead-zinc-copper project in Jefferson County.

The total contract was \$22,930, with \$11,465 in federal participating funds.

Project investigations has been continuing throughout the area by the Bureau of Reclamation.

A definite plan for the Chestnut Valley unit — on the Helena-Great Falls division — has been completed and is undergoing final checking.

The Jefferson unit and Yellowstone division have been the scene of extensive topographical and classification surveys.

The report said Fallon and Terry benches were discovered to have a slight slope to complicate water distribution and require increased leveling.

Other mapping and classification surveys were carried out in the Garrison Diversion unit in North Dakota and plans for passing water through Arrowwood National Wildlife Refuge approved by the Bureau of Sport

Buck Warns

On Loss of Water Rights

Independent Record

Helena, Mont.

11-10-59

Montana will lose its water rights to downstream states if precautionary measures are not taken, Fred Buck, state engineer, told Helena Kiwanians Monday.

Speaking before the regular weekly luncheon meeting of the club Buck stated that with the vast increase of population in the country along with increased use of water by the average person, water shortage may soon be a major problem.

If downstream cities and states are allowed to build large water consuming projects while Montana sits around doing nothing the state will not be able to acquire water rights when it decides to construct some projects in the future, Buck continued.

Form Compacts

Two ways to guard against such things are for the 10 states drained by the Missouri river basin along with the three drained by the Columbia to form compacts which provide for a somewhat equal disposition of water, he said. The other measure would be to start some projects in the state which would insure Montana of getting its just amount of Montana water.

Buck added that currently about 41,000,000 acre feet of water leave the state each year and that about two thirds of that amount originates here. About one third of this amount is handled by the Missouri and two thirds by the Columbia.

Other Problems

He said that there are also other problems facing our water supply with pollution being probably the the greatest. Steps are now being taken however in the work against pollution and it seems to be pretty well in hand.

Montana needs its water for recreation, navigation, power and irrigation and if its people do not wake up soon the state's water

finishing the plant already has been let.

Construction contracts for the Gray Reef Dam in the same unit also have been let, although work has not started.

Work Rapidly

As construction moved steadily toward completion on many projects the National Park Service worked with state institutions and the Smithsonian Institute to obtain archeological and historical information before known sites became covered with water.

Field work by the Smithsonian changed from major excavations of key sites and sampling of secondary sites to a general sampling of all sites, according to the report.

Much information and material obtained can be fitted to the framework of cultural information previously gathered from more thoroughly excavated sites.

The change in procedure was caused by limited crews and funds, competing with rapidly filling reservoirs, according to the report.

and Canyon Ferry reservoirs show that fishing is remaining good. Another visit was made to Yellowtail dam site to examine possibilities for access now limited exclusively to the dam site. Throughout the quarter the Geological Survey continued gathering information concerning surface and ground water in the

four-state area, Montana, Wyoming and the Dakotas, including reports on past floods with an eye to estimating the future.

Investigations into chemical quality and sedimentation of the water continued, plus studies of methods designed to improve conservation practices.

40 Per Cent Done

The Bureau of Land Management completed cadastral surveys on 40 per cent of the acreage programmed for fiscal 1960, including 52,000 acres on the Charles River unit in North Dakota.

Slope project plan was revised to include 37,000 acres of class 1 and 2 lands, since studies showed that class 3 land could not pay the cost of construction and maintenance.

A study on the Wagner unit indicated that lands considered irrigable have never caused selenium poisoning, and that cases of poisoning have been in isolated areas and along steep lands near the Missouri River, the report said.

In Wyoming, investigations continued on the Wheatland unit, Dodge Canyon dam north of Laramie.

Buck was introduced by Russ Stein, program director. Guests at the meeting were Norman J. Robbins and Bill Kearns of the Carroll College Circle K club and Ward Shanahan of Helena.



SENATORS FROWN OVER STATISTICS — Four United States senators, members of the Senate Select Committee on National Water Resources, frowned as witness tossed out a formidable array of statistics to support his thesis. At the left, James E. Murray (D-Mont.) looks at his notes as a witness goes on. At his right, Sen. Robert S. Kerr (D-Okla.), committee

chairman, more familiar with former Indian Territory than with the vast reaches of the Treasure State, checks Montana place names against a map. The frowning lawmaker with the pencil is Sen. Thomas H. Kuchel (R-Calif.), committee vice chairman, and to his right is Sen. Milton R. Young (R-N.D.).—Carp's photo.

6 Complete Testimony At Water Needs Hearing

Seven witnesses completed testimony before the Senate Select Committee on National Water Resources in the Chamber of Commerce Friday.

The hearing was the third in a series inaugurated by the committee Wednesday in Bismarck.

and continued in Laramie, Colo., Thursday and Billings Friday.

Committee members are scheduled to go to Missouri for another session Monday. The series will end in Boston Dec. 8.

Testimony began Friday morning before members of the committee, Sens. Robert S. Kerr (D-Okla.), chairman; Thomas H. Kuchel (R-Calif.), vice chairman; James E. Murray (D-Mont.) and Milton R. Young (R-N.D.).

Anderson first witness. The first witness was Rep. LeRoy Anderson (D-Mont.) of

Others appearing Friday afternoon before the committee seeking information on the long-range use of the nation's water resources were Dr. J. C. Hilde of Bozeman, professor of soils at Montana State College; Colin W. Raff of Butte; Charles Mahoney of Ordway; George Lackman of Billings; Leonard Kenfield of Great Falls; Dr. Wilson F. Clark of Billings; Tom Deckert of Billings; W. J. Everins of Helena and Willard E. Fraser of Billings.

Need to Prevent Waste

Dr. Hilde discussed weather modification and research essential to a long-range program of water conservation. He said, "We are approaching maximum use of our water resources and we need all the information we can get to prevent waste."

Raff, who is a vice president of Montana Power Co., traced his firm's historic interest in water resources and described the power situation in Montana.

Suggests Values Scale

Mahoney, who seeks to use Montana waters to generate power for Montana consumers, recommended a scale of values.

He suggested to senators that water consumption for personal needs should have first priority, next should come irrigation, then power, navigation and finally recreation.

Lackman, Region 9 director of the National Rural Electric Cooperative Assn. and president of the Yellowstone Valley Rural Electric Co-op, said the prodigious growth of use of electric power in rural areas in the last decade had resulted from power development by government projects.

He also commended the establishment of federal transmission lines, which he said, had contributed greatly to the reduction of rates by the Rural Electrification Administration.

Outlines F.U. Policy

Deckert, president of the Montana Wildlife Federation, and Everin, director of the Montana Fish and Game Department, discussed recreational aspects of conservation.

Yellowtail Dam Urged

The Wildlife Federation official pleaded for an ecological approach to multiple use of water, and Everin suggested that in their decisions on development of water resources, agencies adequately evaluate impact of proposed projects on all resources.

He proposed, too, that if power dams be built a fraction of the revenue therefrom be diverted to defray cost of fish management which is complicated by such installations.

Last witness was Fraser, who spoke in behalf of the Billings Chamber of Commerce. He urged the committee to consider among early projects for water resource development construction of Yellowtail Dam on the Big Horn River.

After completion of its series of hearings the committee will compile its information for presentation to the U.S. Senate before Jan. 31, 1961.

Mayor Testifies

Clavadetscher and Waldo projected the water needs of Billings and the latter also presented testimony for the Montana Water Works Assn. and affiliated organizations.

Fabrick stressed importance of irrigation use of water to promote agricultural stability in Montana and described for the senators co-operation between the Montana Water Conservation Board and the Federal Reclamation Bureau.

In testifying in behalf of Dr. G. D. Carlyle Thompson of the state health board, Clarkson stressed the need for planning for adequate supplies of surface water, recognition of the priority of domestic use, adequacy of hydrologic data and need for cooperative planning of water works.

The committee was established during the last session of Congress under a bill introduced by Sen. Mansfield. It seeks information on water needs for domestic uses, agriculture, industry, power generation, flood control and recreation.

Flood Danger To End With Deep Channel

BUTTE (UPI)—Madison Valley will no longer be in danger of flooding from Quake Lake when the Army engineers complete their work of deepening a channel through the mammoth landslide which formed the lake, Lt. Col. Walter W. Hogrefe said Tuesday.

Hogrefe heads the Army Engineers detachment which is cutting the mile-long channel through the

ist Congressional District. Under the plan, the electric companies with the promise of adequately meeting power needs of the region.

Hills Preference Clause

After detailing economic advantages of the Montana Power Co. plan, Raff argued that its operation makes federal construction of plants unnecessary in the state. He attacked the preference clause in federal power marketing laws and proposed an integration of power in the Treasury State.

Speaking as president of the Upper Missouri Generation & Transmission Cooperative and as president of the Midwest Electric Consumers Cooperative, Raff, a long-time state senator from Garfield County, argued for thorough research to obviate crash programs a few decades hence when population and economic development will multiply demands for power.

He agreed with Raff that Montana Power has adequate power but pointed out that it is not available to residents of eastern Montana where, he declared, a shortage exists.

is president, Kenfield, who resides in Great Falls, told the committee that a program of soil conservation, retention of the 160-acre limitation under the Reclamation Act, increased availability of federal power, river development, investing of lending authority in the REA administrator and the establishment of a Missouri Valley Resource Corp. Under questioning by Sen. Kerr, Kenfield admitted that the resources corporation is nothing but the Missouri Valley Authority in a different guise.

Urges Conservation

Dr. Clark, vice president of the Montana Conservation Council and professor of science at Eastern Montana College of Education, urged that water conservation be undertaken on a broad basis, that development begin soon and that efforts be made to resolve conflicts in use and to end the chaotic condition resulting from competition among agencies each concerned with only a facet of the problem.

the need for Yellowtail Dam and for a soil and water conservation research laboratory in Sidney. He advocated allocation of adequate funds for moisture conservation in the Great Plains region and proposed a study of slack water navigation for the Missouri Basin as opposed to flowing navigation.

Other witnesses at the morning session of the select committee were Frank M. Clinton, Region 6 director, Reclamation Bureau; Mayor Carl J. Clavette, Billings; Edward R. Waino, Billings city water department manager; D. P. Fabrick, chief of the Montana Water Conservation Board; and A. W. Clark, assistant director of the Montana State Board of Health.

In addition a statement by U.S. Sen. Mike Mansfield (D-Mont.) was ordered placed in the record.

In his testimony Clinton told of water use in Montana and described the operation of the Reclamation Bureau in this region since the program was inaugurated in 1902.

Hogrefe told the Butte Exchange Club the job of deepening the channel should be completed by the end of this month.

"When we are finished, there will no longer be a flood threat to the Madison Valley," Hogrefe said.

The engineers, using bulldozers, power shovels and other heavy equipment, carved a channel through the slide soon after the quake. However, Hogrefe explained, water erosion on one end of the channel, made it clear there were not as many rocks in the slide as originally thought.

Thus, he said, it was necessary to cut the channel deeper and reduce the capacity of Quake Lake to lessen the danger of flooding.

10/1/59

Just Musing

By Oliver Borlaug

Shortly on the heels of the "period of silence" on the part of the North Dakota Nitrogen Corp. on their plans for the Riverdale chemical plant, came the announcement that the District Corps of Engineers office at Riverdale may be eliminated. There would be a literal handful of families remaining at Riverdale to man the power plant, for custodial and similar duties.

McLean county has a greater stake in these developments than most of our people are aware of.

While agriculture will always be our No. 1 source of income, not much vision is needed to see the need for that type of economy to be bolstered by other activities, which would also give employment opportunities lost through automation on the farm. This forces our young people, not only high school but also degree engineering graduates from our colleges and university, to leave the state of their birth because there are no opportunities here.

And, industry would indicate that we as a county and state are growing. The alternative to growth is stagnation followed by a slow, lingering death, not only of an area but of the dreams, ideals and investments of its people.

For selfish reasons, we in McLean county are concerned about talk that would in effect "kill" Riverdale as far as our circle of communities is concerned. All of us number among our friends people in Riverdale. It has a fine school which particularly in years past has "made things interesting" in the world of interscholastic sport; Its people have shopped in our stores, have joined in the hunt for game, and have worked with those from our other communities in church and social work. We are proud of Riverdale; we want

YEARS BACK while we all were yearning for the benefits which "just one" industry in the area would bring an engineering firm from farther East was quietly conducting a survey and making tests. Involved was a plot of ground near Riverdale, and the biggest pile of coal we ever saw—the coal that had been taken from the ground during the time the Garrison dam project was under construction.

Some time ago, we all joined in considerable jubilation; North Dakota Nitrogen was to build an agricultural chemical plant at Riverdale, using North Dakota's greatest resource besides its people—Lignite. This engineering firm, an impartial organization, had decided that Riverdale would be the best spot for such a plant; that use of lignite was efficient. Construction on this plant was to begin "in the spring."

Visionaries and realists alike saw more than one industrial plant; they saw the possibility of more, perhaps even of the "lignite complex" which someday will be the salvation of our state, insofar as industry is concerned.

To offer even further encouragement was the report from the engineering firm which indicated an industrial plant in this area was not only feasible but desirable — better news than we had ever dared hoped for.

But, like a circus balloon suddenly punctured, we are suddenly again faced with reality. We are in the cold calculating business world—small potatoes; that the larger community, with more to induce an activity of any kind whether it be a dentist or an airplane plant, is in a better bargaining position or place of influence to attract industry. To even further confuse and perplex; as far as we know, the company has not made a public statement in regard to what site it plans to use; that apparently the report from the engineering company about the desirability and

Irrigation Expert's Duties Are Two-fold

Bismarck Tribune 10-2

By JACK E. CASE

Tribune Staff Writer

Farmers in the Garrison-Diversion area will have the benefit of expert advice to guide their decisions regarding repayment contracts offered by the federal government.

The Conservancy District has employed Engineer H. A. Parker of Ephrata, Wash., to study the proposed contracts and advise the district regarding its provisions.

This advice will be based on 50 years of professional experience with irrigation projects, and will

also be aided by legal counsel provided by Bismarck attorney William Daner, whom the board also has retained to aid in the contract study.

District spokesmen point out that Parker's duties here will be two-fold. Besides providing counsel on the contracts he will advise farmers and the irrigation districts on operating methods.

As the districts have the responsibility of delivering the water to the farmers and also for the operation and maintenance, Parker will suggest the type of operating organizations he feels is best suited to the various irrigation areas.

IN SOME CASES he is expected to advise that work be carried on jointly by several districts. He will also suggest the number and type of employees needed.

Most of Parker's work, however, will be concentrated on the provisions of the contracts the government is offering the Conservancy District and the individual irrigation districts.

Because of irrigation's complicated operations, the contracts themselves must spell out technical details difficult for a layman to understand. It will be Parker's task to interpret these provisions and advise as to their acceptability.

TWO TYPES OF contracts are involved and Parker will consider both of them. There is the "master contract" between the federal government and the conservancy district, and a "three-way" contract involving the federal government, the conservancy district and the individual districts. The conservancy contract can be approved by the directors but individual farmers will ballot on acceptance of the irrigation district terms.

The relationship between the three has been likened to that between a manufacturer, a wholesaler, and a retailer. In this case, the government manufactures the water, and delivers it to the conservancy district. This portion of the transaction is covered by the master contract.

THEN, AS A "wholesaler" the

UNDERWOOD NEWS Civic Club Opposes Elimination of Garrison District Riverdale Office

The October meeting of the Underwood Commercial Club was held Monday evening in the basement of the city hall. A big share of the meeting was taken up with arrangements for the Pancake and Sausage supper to be served Saturday, Oct. 24th.

Marvin Scott, Art Wohl and Frank Lutz are on the committee in charge of arrangements for the supper. They have appointed chairmen for the various departments and all citizens of the city and community are urged to help out with the project whether or not they are members of the club.

The club voted to furnish a lunch at the annual McLean County Crop Show here on November 6th and a number of business people volunteered to furnish the door prizes for the event.

Arrangements were made to have Santa Claus in Underwood on Saturday afternoon, Dec. 12th at which time he will talk with the children and pass out treats to them with the help of his assistants. The Christmas decorations will be put up about Thanksgiving time.

The meetings throughout the

ning which would promote the growth of our newest city.

And, North Dakota stands on the brink of a new era. Part of that new age will include the irrigating of one million acres of land, a project which Congress, promised under a solemn commitment made in 1944.

Because the people in the District office at Riverdale are more aware of local situations, trends and the attitudes of our people on current issues, and are in a position to make suitable recommendations, we in McLean county should use our every resource to most vigorously protest elimination of the Garrison District and its office and staff.

been crowded out by factors which we can only guess.

ON BOTH COUNTS—N. D. Nitrogen and the closing of the District office at Riverdale—it would be easy to take a fatalistic, "What's the use" attitude. This we do not choose to do. Civic organizations should most strongly protest closing the Riverdale office of the Corps of Engineers, and as far as N. D. Nitrogen is concerned, the public is entitled to know why Riverdale has apparently been abandoned as a plant site; why the public has not been informed why the decision to use Riverdale has apparently been cast aside and why the findings of an impartial engineering firm, as far as the site is concerned, have been disregarded.

It is a serious matter. Now is not the time to throw in the towel. We in the smaller population areas want to grow too, like our cousins in the Bismarck-Mandan, Wahpeton and Grand Forks areas.

The Commercial Club adopted a resolution opposing the elimination of the District office of the Corps of Engineers. Copies of the resolution will be sent to headquarters of the Engineers Corps and to the North Dakota Congressional delegation.

Reservoir Water Releases Reduced

RIVERDALE — Water releases from Garrison reservoir currently are averaging 12,000 feet per second, Ralph Oehler, district hydrologist, said today. Last weekend they were reduced from 15,000 cfs which had been the rate for several weeks.

The reservoir went into its winter operational phase early in October when the releases were cut from 20,000 to 15,000 cfs. The reduction was made possible through the closing of the navigation season on the lower Missouri river, the engineers said.

the retailer, which provides the water to the individual farmer.

The irrigation district contract Parker is studying now is the one specifically offered the Dickey-Sargent district, but it is typical of those that will be offered to others. In general, it provides for repayment of a portion of the costs, the amount of water to be supplied and the relations between the irrigation district and the conservancy district. This involves operation, maintenance and provisions for the "missing acres", which consist of irrigable acres owned by farmers who don't want to be included in the program.

IT IS HOPED that Parker will have a preliminary report completed and ready for presentation to a special nine-director coordinating committee in Jamestown Nov. 5. This committee consists of directors of the conservancy district.

The ultimate target is to have all objections reviewed and revisions agreed upon by the time hearings on Garrison Diversion start in Congress next year. These will be considered at the January meeting of the conservancy board.

\$19,000 Initial Payment To Water Treatment Plant Contractor Approved By City

Initial payment for construction work on Williston's new water plant was approved Tuesday night by the city commission.

The sum was \$19,317.22 on a first estimate submitted by the J. and A. Contracting Co., which is building the treatment plant.

In order to make the payment \$50,000 was transferred from the city water account to the water plant construction fund. City attorney Everett Palmer pointed out that the transfer might as well be made now since other estimates would be coming in.

Alec Rawitscher, president of the commission, was authorized to enter into an agreement with the Great Northern Railway for a right-of-way easement for water intake work on the GN property at the edge of the river, during construction of a portion of the new water system.

The commission also approved an agreement with the state highway department to acquire land within the city for the by-pass to be built by the state, and also pay 25 per cent of construction costs for a section of the by-pass within the city on north Second street and in the northwest part of the city.

The city's estimate of the share of construction costs is \$27,145, or one-fourth of the total cost of \$103,000 in that section.

The city also is applying to the government for federal aid in helping pay the cost.

Only one bid was received for sewer and water service connections in the Scott and College Hill additions. This was presented by L. & S. Improvement Co. at a bid of \$22,301. The commission decided to hold action over for a week.

Arthur Al Hackenberg, apartment owners in the Knollcrest addition at the extreme northwest part of the city, Hackenberg explained property owners had paid

areas, especially Senior High School, be reduced to 15 miles an hour. Present limits are 20 miles an hour.

This request was turned over to Police and Fire Commissioner Robert Falstad, to review with Police Chief Don Hewson and the city attorney.

Award Contracts Mandan (ND) Daily Pioneer On Lower Heart

By The Associated Press
The Corps of Engineers has announced award of two contracts for work at the lower Heart flood control project at Mandan.

Schultz & Lindsay Construction Co., Fargo, received one contract on a bid of \$252,267; a second contract went to William A. Smith Contracting Co., Kansas City, Kan., at \$22,922. The latter is for a portion known as the Sunny unit.

The dikes will protect Mandan and vicinity from flood waters of the Heart River. Deadline for completion of the work is Nov. 1, 1960.

Sites Other Than Riverdale Being Studied For N. D. Fertilizer Plant

Fargo Forum 11-6-59

BISMARCK, N. D. (AP)—North Dakota Nitrogen Co., Bismarck, which announced plans a year ago to build a fertilizer plant at Riverdale to use up a big stockpile of lignite, apparently has cooled on the idea.

In an announcement issued jointly by the firm's president, George

G. Van Nostrand, and Col. Walter W. Hogrefe of the Corps of Engineers, it is stated that a survey is under way to find a plant site other than Riverdale.

In addition, the announcement says that negotiations for the lignite have been delayed to permit further research of the feasibility of using lignite as a raw material for chemical fertilizer.

About 2 million tons of lignite were stockpiled when Garrison Dam was built. Original announcement of the firm in October, 1958, indicated it would use this coal and probably build its plant at Riverdale on property leased from the government.

* * *

Says the new announcement: "When it became clear from the site survey that some delays could be avoided by using a site other than Riverdale for the initial plant, we so advised the government."

"However, we have assured the government of our continuing interest in finding economically feasible uses for lignite; and our proposal should permit continuing research to develop such uses for this raw material abundant within the state."

Officials of the firm refused to add much to the brief announcement.

One official said, however, that the company is closer to actual construction of a plant than ever before and that about a dozen sites are being considered for its location.

There has been speculation that the firm might decide natural gas a more feasible raw material for nitrogen fertilizer than lignite, but the company wouldn't comment on this possibility.

* * *

Riverdale is a town built by the government to house Corps of Engineers officials and other persons connected with the construction and operation of Garrison Dam across the Missouri River.

Detailed Surveys Reduce Diversion Irrigable Acres

Bismarck Tribune 10-23-59

By JACK E. CASE
Tribune Staff Writer

Detailed surveys have now been completed on some 100,000 acres of land in the Garrison diversion area which will reduce the irrigable acres by about 10 per cent.

This is reported by Bruce Johnson, projects manager for the Bureau of Reclamation, who released details of the survey which has been conducted over the past two years.

Involved were 100,000 acres in the Oakes and Warwick-McVillie areas originally classified as "irrigable" under the semi-detailed report now being considered by the Bureau of the Budget.

Closer scrutiny provided by the detailed survey has eliminated about 10 per cent of this land from the irrigable classification, Johnson said.

"This always happens, and is always regrettable," Johnson commented, "but is of no great consequence, because there are plenty of other areas in North Dakota where those acres can be picked up."

THE SURVEY under which the

original report was made is classified as "semi-detailed". It involved boring about four test holes for each 160 acres of land. Detailed surveys require at least four times that many tests, and usually considerably more.

Johnson explains that this closer scrutiny furnishes information missed when the less detailed survey was taken.

In general, the new survey discarded land for two principal reasons, topography and permeability.

THE CLOSER TEST holes, plus extensive talks with landowners, produces information on sub-surface rocks, for example, that might have been missed originally. The surveys also disclose areas rougher than originally supposed that would require excessive leveling before irrigation would be possible.

The permeability for which land was discarded involved both ends of the scale. In the Oakes area land was rejected because it would contain water too well, while in the Warwick vicinity some was found that wouldn't hold it well enough.

JOHNSON SAID that field surveys have been finished in the Karlsruhe and Souris areas which will result in some rejection on topographic grounds.

Effect of the surveys on the whole diversion project will be

Interior Official Labels Diversion Plan Sound

Bismarck Tribune 11-3-59

Engineers Map

1933, the money to be used to grade the streets. This, he said, has not been done, adding that lack of thoroughfares has made sale of the lots difficult. There are only two homes in the area. Hackenberg asked that the money either be repaid or the streets maintained.

City auditor H. L. Grimstedt explained that \$25 had been paid on 76 lots.

The commission held final action over until next week pending an investigation into the problem.

Grimstedt also told the board a request had come in for a new stage at the new armory, the claim being that the present facilities for a stage are inadequate. The commission called for an investigation into prices with the view of acting on the matter at the next meeting. Commissioner Carl Albers said a new stage had been suggested as one of the early projects following the completion of the armory.

A delegation from the Pacemakers Club appeared before the board asking that speed limits in school

FARGO (AP) — A U.S. government official Monday night termed the Garrison diversion project "sound" and "a program North Dakota can be proud of."

Speaking was Elmer F. Bennett, undersecretary of the Department of Interior. Bennett arrived here to address the sixth annual area power conference at its banquet Tuesday night.

Bennett said, "we feel that the state is entitled to fairness for the land its farmers have given up to get main stem control of the Missouri River."

He said it is expected the Garrison diversion report will go before Congress before the first of

the year. Technicalities of wordage now are being worked out in the report, he said.

The government official called the new version of the Garrison report "economically better." The new version provides for 250,000 acres, instead of a million acres for start of the diversion project.

Attending Tuesday's conference were power representatives from North Dakota, South Dakota and Minnesota.

Included on Tuesday's agenda was a tour of the North Dakota Agricultural Campus, a smorgasbord luncheon and discussion of various technical matters pertaining to electrical power.

cause in... it will mean only short... rather than elimination of them completely. Only in the case of complete canal elimination would the expense reduction be proportionate. Johnson said that in a few years it appeared it would be possible to eliminate a canal completely.

Take Rafts From Garrison Reservoir, Engineers Warn

RIVERDALE, Minn. — and swimming rafts should be removed from Garrison reservoir waters before the freezeup this fall, the Army Engineers in Riverdale warned today. If the devices are left over the winter, the engineers said they are likely to break loose from moorings and cause an expensive salvage problem. The rafts referred to consist of wooden platforms moored on empty oil barrels and they exist in most every public beach about the reservoir, the engineers report.

At Riverdale

The present Garrison District Office of the Corps of Engineers will not be closed and combined with the Omaha office, but will be changed to an area office, it was learned Saturday. The Garrison District Office is located at Riverdale.

A member of the staff of Sen. Milton R. Young (R-ND) said Maj. Gen. Keith R. Barney, division engineer for the Corps at Omaha, said any reports about closing the office were in error.

Changing to an area office, contemplated next spring, will mean a transfer of some activities to Omaha but the area engineer and his staff will remain at Riverdale.

Agenda Drawn For Minot MBIAC Meeting In April

A proposed agenda for a meeting of the Missouri Basin Inter-Agency committee in Minot next April was drawn at a meeting of the North Dakota Water Conservation commission in Bismarck Friday.

Five items approved for the agenda called for:

1. A presentation by the generation and transmission cooperatives in the state, which will be made up of various REA cooperatives. The private power companies will merchandise surplus power produced.
2. A presentation of the International Joint Commission by representatives from the Canadian government and the U. S. government.
3. An interim report on the findings of the Select Senate Committee on National Water Resources.
4. The responsibility of power and reclamation as paying partners in the development of the Missouri Basin project.
5. Developments of the saline water program, presented by a Washington, D. C., representative of the program.

The commission adopted a resolution urging the Corps of Engineers to start work immediately on stabilizing the banks of the Missouri river.

The commission said that remaining Missouri river bottomlands are being eroded away at the rate of 500 acres a year between Bismarck and Garrison dam.

Officials have said this erosion was speeded up by construction of the dam. In its normal water course, the river replaced about as much land as it eroded.

The Corps also was asked to consider an emergency project on the Sheyenne river to alleviate possible flooding in the West Fargo area. The corps has authority to construct projects up to \$400,000 without congressional approval.

State Engineer Milo Hoisveen was asked by the commission to hold hearings in the West Fargo area on the question of establishing

The commission, the Game and Fish Department and the Bismarck park board will join in the Rice lake restoration project in Burleigh county.

Also approved as the request of Gov. John E. Davis that the Corps of Engineers maintain its Riverdale station as a district office rather than reduce it to an area office. The Corps has said the change will be made as an economy move, with some Riverdale functions moving to Omaha.

The commission approved requests for installation of drop structures in Drain 22 in Cass county and Drain 64 in Richland county, agreed to continue survey work in the Lake Metigoshe area, and approved several water right applications.

For New Plant

Williston To Hike Water Rates, Taxes

WILLISTON — Residents here face higher taxes and higher water rates to finance the \$3 million water plant and intake structure under construction, a financing plan approved by the City Commission, discloses.

The Corps of Army Engineers will provide approximately \$1 million toward the total cost and the City Commission proposes the rest be raised as follows:

\$900,000 by a special assessment to be collected at the rate of \$45,000 a year plus 5 per cent interest for the next 30 years.

\$350,000 by a citywide general tax to be paid at the rate of \$17,500 annually, requiring a two mill tax rate increase.

\$750,000, an estimated figure, to be raised by an increase in water rates.

Proposed Lowlevel Dam Near Bismarck Said Not Feasible

OMAHA (AP) — U.S. Army engineers say a proposed low-head dam on the Missouri River near Bismarck, N.D., is not feasible economically or engineering wise.

The unfavorable report was announced by the Missouri River division office of the engineers. The survey was authorized by the Senate Public Works Committee 1½ years ago.

Local interests asked the investi-

gation to determine the feasibility of building a dual purpose dam. The dam would provide a crossing for the projected interstate highway and an area for recreation, boating and fishing.

The engineers' report said the storage capacity would be small and so there would be no flood control benefits. "The power benefits that could be derived would be insufficient to justify the construction of power general facilities, and there is no immediate

prospect of commercial navigation.

While there would be an increase in recreational boating facilities there would be damage to wildlife nesting areas, the report said. The water supply for the city of Mandan might be affected through increased algae growth.

Records of sediment discharge in the Missouri River indicate that the life of the reservoir behind the dam would probably not be longer than five years.

Budget Bureau Said 'Hopeful' Of Early Diversion Report

The North Dakota Water Users Assn., headquartered in Minot, has been notified by the office of Sen. Milton R. Young that the Bureau of the Budget is "very hopeful" that its report on the Garrison Diversion project will be in the hands of Congressional committees in advance of the Jan. 4 opening of Congress.

Oscar N. Berg, executive secretary of the Water Users, said the information was received from a high ranking official of the bureau. The official reported some additional information on the 250,000-acre project had been received last week and was being tabulated and that unless something unforeseen occurred the review would be complete and the report released within a short time.

Budget Bureau officials asked for a revision of the project plans, originally encompassing a million acres of irrigation, to a 250,000-acre project on which to seek the

initial authorization. As additional units are added new authorization would be required.

Berg said once the report is out of the Budget Bureau, North Dakota reclamationists will face a big job in getting favorable action on authorization.

He said plans have been mapped for representatives of the North Dakota Water Conservation commission, Garrison Diversion Conservancy District, and the Water Users to meet with the state's congressional delegation to map strategy for appearances before congressional groups.

Berg said getting authorization for the project in Congress will be a big assignment in the light of all the other demands on the federal budget.

While the authorization itself involves no federal outlay, he explained, it would mean the project is cleared for later receipt of construction monies.

2 Contracts Awarded By Garrison Engineers

McLean Co. Independent RIVERDALE — Two contracts for work at Riverdale have been awarded by Garrison District of the Corps of Army Engineers.

The General Electric Co., of Bismarck won the job of furnishing auto transformers for the power plant at Garrison Dam. The deadline for equipment delivery is Jan. 1

N. D. Water Unit To Eye Program For MBIAC Meet

11-18-59
The North Dakota Water Commission will meet Friday to consider the program for the Missouri Basin Inter-Agency Committee meeting in Minot next April.

Among items proposed for the MBIAC program are:

Talks on proposals to build a big steam generating plant for rural electric cooperatives, a report on management of international waters, a report on findings of the Senate Select Committee on national water resources, the salt water program and other matters.

THE INTER-AGENCY committee consists of state and federal agencies concerned with Missouri Basin water development.

The commission Friday also will have before it a number of more immediate problems concerning North Dakota water development.

One is a request by the City of Belfield for construction of a dam on the Green River north and east of that city. A recent survey indicates a sizable dam is feasible in the location.

The commission also will study requests from West Fargo for flood control improvements and the commission will consider asking the Corps of Engineers to install out-

Williston Herald Corps Reschedules TWO BID OPENINGS

Rescheduling of bid openings on two projects was announced by the Corps of Engineers today.

They include the Highway 85 raising and resurfacing contract, and stage 3, schedule B, of the Buford-Trenton bank stabilization project.

trict, which would set up machinery for cooperating with the Corps of Engineers.

The commission agreed to participate in construction of Balta dam in Pierce county, with the county and State Game and Fish department also to bear part of the cost. The dam will create a lake of about 90 acres for municipal water supply and recreation.

er water rates will be effective Jan. 1, 1960. Under the new rates, minimum cost for residences will be \$2 and for commercial firms \$2.50. In addition, the first 1,000 gallons of water used by residences will be 30 cents and subsequent consumption will be on a scaled down basis, reaching a low of 21 cents per thousand gallons. Commercial rates will be slightly higher.

There will no longer be any free water offered in the city. City departments and the Park district will be required to pay for any water used, the City Commission decided.

calls for any additional 19,000 tons of stone to be quarried for placement on the McKenzie side of the river. The work involves repair of an existing rock levy in the Lewis and Clark Irrigation district.

Elimination of one rock dock on the Williams county side will reduce the amount of rock originally called for from 61,620 tons to 56,000 tons, spokesmen said.

Bids on the Buford-Trenton project will be opened Nov. 17 and on Highway 85 on Nov. 24. Both openings will be in the Board Room of the new Armory at 2 p.m.

ing of the Riverdale water treatment plant mixing chamber went to the Patten Improvement Co., of Albert Lea, Minn. Completion of the latter job is stipulated for Feb. 15, 1960.

12-1-59 Governor Asks For Missouri River Bank Stabilization

BISMARCK (AP)—Gov. John Davis has informed the Corps of Engineers that emergency bank stabilization is needed on the Missouri river, between Oahe reservoir and Garrison dam.

The governor asked for immediate action, following a resolution passed by the State Water Conservation commission stating that a 1959 study shows excessive bank erosion along the Missouri.

According to the study, 440 acres are lost each year as a result of clear water released from Garrison dam.

N. D. Irrigation Job Contract Awarded

RIVERDALE, N. D. (AP)—The Corps of Army Engineers has awarded a contract for bank stabilization work on the Buford-Trenton irrigation project west of Williston to Peter Kiewit Sons Co., of Billings, Mont.

Amount of the contract is \$263,833. The work consists of 210,400 cubic yards of excavation and placement of 88,000 tons of rock to stabilize the banks of the Missouri River. The work must be completed by June 1.

The Kiewit firm outbid seven other concerns. The government estimate on the job was \$335,320. Work will begin about Dec. 15.

Diversion 20 Years Away

in Bottineau: Johnson

Minot Daily News 11-12-59

ESTHOPE—Garrison Diversion be a "next generation" project for Bottineau County, Bruce Johnson, Bismarck district project manager for the Bureau of Reclamation told a gathering of 325 businessmen and farmers at a dinner here Wednesday night.

Because no irrigation district has been formed in Bottineau County, a project for a small sector in the middle Souris district, its land would not be a part of the first phase of the 250,000 acres which, he expected, Congress will be authorized to build.

Johnson said that means it could be 20 years before water is available in areas scheduled for irrigation in Bottineau County.

If when the entire project is authorized, however, Bottineau County would get between a fourth and half of the land to be irrigated. is not a foregone conclusion, however, that the project will become a reality, Johnson warned.

Because of the unusual degree of acceptance in the state, Johnson said the feeling has been growing among residents that it is just a matter of time until the Diversion project begins to unfold.

"This is one of the great dangers of the project faces," he said. pointed out that there is a growing demand for water all over the Missouri basin and that the large

attitudes that the Diversion project will require will not be forthcoming without a real selling job.

Johnson disclosed to The News lands which will be irrigated under the first phase of the project. They include 40,000 to 50,000 acres in the Dickey-Sargent district; 14,000 acres in the James River district; 45,000 acres in the Dickey-McVillie district; 14,000 acres in the Karlsruhe district; and about 70,000 in the Middle Souris district.

The location of another 50,000 acres has not yet been determined, he said. An area near Newford is being considered because it can be served economically by the New Bedford canal.

The outlay for the first stage of the project, he said, would represent about a third of the total project cost, based on a million acre irrigation development.

To hold down the cost of the initial phase and to make it a unit that would be economically feasible on its own, Johnson said the canals and some of the other structures are to be built on a somewhat reduced scale.

They were designed, however, to be enlarged at a minimum of cost to serve the larger project, he added.

He disclosed that two factors are entering the picture that may slow the construction timetable which calls for a start in fiscal year 1963.

One is the cuts made in the past two years in investigations funds.

The other is the fact that the initial construction unit will embrace 250,000 acres instead of 200,000 as envisioned previously. When authorization for the entire 1,000,000-acre project was being sought, it was planned to include 200,000 acres in the first stage of construction. Now, to make a feasible unit, the initial irrigation total was enlarged.

That means detailed studies have to be made on another 50,000 acres, Johnson explained.

While the old plan would have required only one authorization from Congress for the entire million acres, the new one requires a new authorization as each phase unfolds.

That change was made to satisfy the Bureau of the Budget which has been holding up the feasibility report for more than a year. Latest indications are that it will now be cleared for action on authorization at the coming session of Congress.

The meeting, held in the Westhope High school gymnasium, was opened by Ed Wiltman, chairman of the arrangements committee for Chamber of Commerce, sponsoring organization.

He said the annual event was held in recognition and appreciation

N.D. Asks Work to Save Land

11-21-59

By The Associated Press

The North Dakota Water Conservation Commission Friday adopted a resolution urging the Corps of Engineers to start work immediately on stabilizing the banks of the Missouri River.

The commission said that remaining Missouri River bottom lands are being eroded away at the rate of 500 acres a year between Bismarck and Garrison Dam.

OFFICIALS have said this erosion was speeded up by construction of the dam. In its normal water course, the river replaced about as much land as it eroded.

The corps also was asked to consider an emergency project on the Sheyenne River to alleviate possible flooding in the West Fargo area. The corps has authority to construct projects up to \$400,000 without congressional approval.

STATE ENGINEER Milo Hoiseven was asked by the commission to hold hearings in the West Fargo area on the question of establishing a water conservation and flood control district. The West Fargo City Council asked for such a district, which would set up machinery for cooperation with the Corps of Engineers.

The commission agreed to participate in construction of Balta Dam in Pierce County, with the county and State Game and Fish Department also to bear part of the cost. The dam will create a lake of about 90 acres for municipal water supplies and recreation.

Riverdale Our As-Site For Fertilizer Plant

Minot Daily News 11-6-59

Officials of North Dakota Nitrogen, Inc., today substantiated what for months had been a well-founded rumor—that Riverdale was to be the site of the initial fertilizer plant of the company.

In an announcement issued today by the firm's president, George G. Van Nostrand, and Col. Walter W. Hogrefe of the Corps of Engineers, it is stated that a survey is under way to find a plant site other than Riverdale in the southern half of the state.

In addition, the announcement says that negotiations for the lignite have been delayed to permit further research on the feasibility of using lignite as a raw material for chemical fertilizer.

About two million tons of lignite were stockpiled when Garrison dam was built. Original announcement of the firm in October, 1958, indicated it would use this coal and probably build its plant at Riverdale on property leased from the government.

Says the new announcement: "When it became clear from the site survey that some delays could be avoided by using a site other than Riverdale for the initial plant, we so advised the government."

"However, we have assured the government of our continuing interest in finding economically feasible uses for lignite; and our proposal should permit continuing research to develop such uses for this raw material abundant within the state."

Officials of the firm refused to add much to the brief announcement. One official said, however, that the company is closer to actual construction of a plant than ever before and that about a dozen sites are being considered for its location.

A persisting rumor is that Wahpeton and the Bismarck-Mandan areas are getting prime consideration.

There has been speculation that the firm might decide natural gas a more feasible raw material for nitrogen fertilizer than lignite, but the company wouldn't comment on this possibility.

Riverdale is a town built by the government to house Corps of Engineers, officials, and other persons connected with the construction and operation of Garrison dam across the Missouri river.

Priorities Advocated On Water

DES MOINES, Iowa (AP) — Congress should establish clear-cut priorities for the use of water in the Missouri Basin, the Senate Select Committee on Water Resources was told Thursday.

Ken Holum, Aberdeen, S. D., executive director of the Midwest Electric Consumers Assn., presented a prepared statement. He also said slack water navigation should be explored and developed.

Holum proposed the following priorities in order: (1) domestic and municipal consumption and pollution control; (2) irrigation, including ground water, recharge and industrial consumption; (3) hydroelectric power; (4) fish, wildlife and recreation, and (5) navigation.

"WE MUST NOT continue a program that syphons 11 million acre feet of water out of the arid and semi-arid Missouri Basin and speed its flow to the sea," he said.

"Slack water navigation, behind a series of low head dams, will be better navigation both because it will be more dependable and because boats and barges will not have to contend with the current in a swiftly flowing stream."

The slack water system could develop more than two million kilowatts of electricity, his statement said.

Further Details Told on Garrison Office Changes

OMAHA (AP) — Further details on

ration unless an irrigation district is organized and no district yet been formed in the New Rockford area.

ould another area organize a district within feasible limits for service by the initial canal structure that district could get in ahead of the New Rockford area.

the Westhope area would be difficult to serve in the initial phase of the project, Johnson said, because capturing of return flows to them from flowing into Canaan involves providing some major structures not provided for in the estimates of the first phase of the project.

Johnson told The News the first phase would involve an outlay of \$150 million in new money with an overall total cost of \$208 million. The latter figure represents the Diversion project's share of the cost of building Garrison dam and the Garrison power network. Only part of the cost would be charged to irrigation, however, as other benefits—some reimbursable—also carry a share of the load.

year.

He introduced Mayor James Munn who delivered the welcoming address and commended the farmers and oilmen for cooperation in church and civic activities resulting in a better community.

Jay Reed, chairman of the Bottineau county Agricultural Stabilization and Conservation committee, introduced members of his committee and Clarence Sanderson, now a member of the state ASC committee.

In a brief address Sanderson told the group that he expects big changes to be made in the ASC program in 1961.

Others who spoke briefly were Banks H. Sieber, county extension agent, and Albert Baumann, Jr., program chairman. Baumann presented the Westhope High school band which had provided dinner music.

and Fish Department and the Bismarck Park Board will join in the Rice Lake restoration project in Burleigh County.

Also approved was the request of Gov. John E. Davis that the Corps of Engineers maintain its Riverdale station as a district office, rather than reduce it to an area office. The corps has said the change will be made as an economy move, with some Riverdale functions moving to Omaha.

The commission approved requests for installation of drop structures in Drain 22 in Cass County and Drain 64 in Richland County, agreed to continue survey work in the Lake Metigoshe area, and approved several water right applications.

Madison, S. D., told the committee Thursday that electric power never has been allocated water from the main stem of the Missouri River.

He said "navigation takes the lion's share of the water, yet power pays for the reimbursable parts of the program, and navigation pays nothing."

JONES SAID that if power "is to receive no allotment of water, they should have storage in the reservoirs to have a maximum head for winter generation.

"This may mean the curtailing of navigation for a few years," he added, "but it certainly would help the government in recovering the cost of these federal works."

Jones said power is going to pay for about 85 per cent of the costs of developing irrigation along the Missouri River. He said the water requirements set aside for irrigation should be given to power in the winter.

neers at Riverdale, N. D., an area office under the general supervision of the Omaha district office, were announced Tuesday.

Maj. Gen. Keith R. Barney, Missouri River division engineer, said the Garrison office will not be closed but will continue to operate and maintain the Garrison Dam powerhouse and reservoir and will continue to be an agency to which state and local interests in North Dakota will have access.

He said, however, that the Garrison office was established in the late 1940s primarily for the purpose of design and construction supervision of the Garrison Dam project. This construction is now essentially complete save for the last two generators on which work is well advanced, and it now is necessary to review the organization in the light of the reduced work load.

Gen. Barney said the adjustment which will be completed about April 1, 1960, will put some of the services now performed by the Garrison office in the hands of the Omaha district office, "permitting over-all economies in the use of corps funds and personnel."



FIFTEEN FEET UNDER WATER — Workmen here are shown in process of laying sections of the 20-inch cast iron pipe which will carry the city's water supply by gravity flow from the Missouri river at the Lewis and Clark bridge, first to the intake structure, through

a treatment plant, and thence through a huge concrete transmission to storage reservoirs in the city. The men are working at a level 15 feet below the average river level.



Riverdale Adds Free Film On Recreation

RIVERDALE (AP)—A color motion picture, describing recreation activity on Missouri river reservoirs built by the Corps of Engineers has been added to the Riverdale Corps library for free showing by schools, clubs, public bodies and television stations.

Considerable footage in the 16mm film, "Reservoirs of Recreation," is devoted to Garrison and Fort Peck scenes, Army engineers said. Running time is about 18 minutes. Other projects shown are Oahe, Fort Randall and Gavins Point in South Dakota, and those on Missouri river tributaries in Nebraska and Kansas.



—Williston Herald Photos

ELEVEN CARLOADS OF PIPE — Through these huge cast iron sections of river crossing pipe will come the city's water supply when its three million dollar supply system is finally completed. The sections, 15.8 feet in length and 20-inch diameter pipe weight 250 pounds each per foot or 4,000 pounds to a section. The four supply lines are bolted together with "ball and socket" joints which permit flexibility not found in supply lines usually laid within the city. After the joining the sections cannot be taken apart.
(Story on Page 1)

12-16-59
**Miles Alonzo Hotel
Has New Operator**

RIVERDALE — A new concessionaire—Mrs. Emma Murray—has taken over management of the Miles Alonzo hotel in Riverdale.

She succeeds Mrs. Gladys Woodruff who has moved from the city.

Mrs. Murray announced that the dining room and coffee shop maintained in the hotel would be open henceforth seven days a week, with an evening closing hour of 9 p.m. Mrs. Murray is a local resident.

The hotel and dining room are under the supervision of the Post Restaurant council.

Army Operates Fort Peck Navy

Fleet Plies Lake Far From Coasts

FORT PECK—The scene is similar to dozens of others at seaports on both coasts. A massive derrick boat rocks ponderously at the docks, tugging at heavy cables.

A work boat is anchored alongside, packing a "Sea Mule" in dry dock on its deck. A sea-going tug chugs past, headed for open water.

Contrary to appearance, this small fleet is thousands of miles from coastal waters. The field of operation is Fort Peck Lake, one of the largest inland lakes in the country.

Officers in the "navy" wear bars instead of stripes, since the fleet is under the command of the U.S. Army Corps of Engineers.

Sailing inland waters is not the soft job it might appear. The landlocked sailors work the combination of boats in slack water, without the help of strong currents normally associated with boat handling.

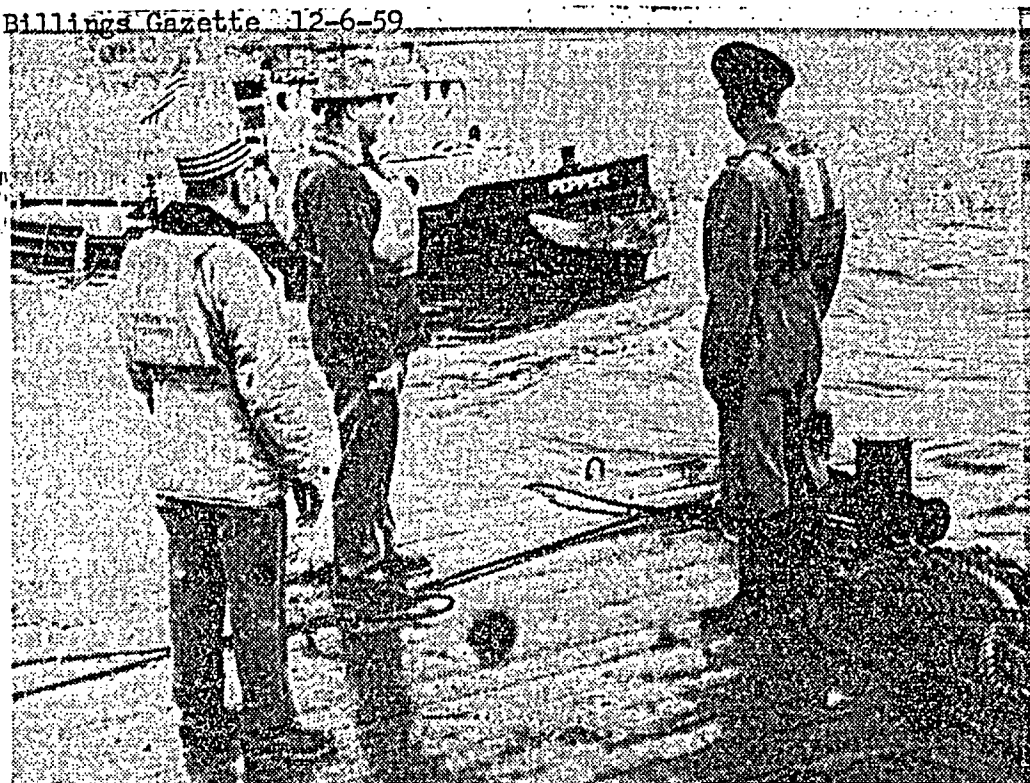
Versatile Unit

Probably the most versatile unit in the fleet is the 40-foot sea-going tug, "Pepper."

The boat's main purpose is towing a heavy derrick barge to areas in 189-mile long Fort Peck reservoir for work on various stages of Fort Peck dam and power equipment.

But standby duty for search and rescue or moving a diving barge is also part of a day's work. The chunky sea roustabout served as a harbor tug in the New Orleans area before transfer to Fort Peck. Powered by a German-built five-cylinder, two-cycle diesel engine, the tug can

Billings Gazette 12-6-59



FLEET FLAGSHIP—Most versatile unit of the Fort Peck fleet is the 40-foot sea-going tug, "Pepper." The squat craft is used for a multitude of purposes, ranging from maneuvering heavy work barges to standby for search and rescue work. Watching the tug dock beside

a diving barge are, left to right, George Haynes, maintenance foreman; Don Beckman, chief of operations, and Capt. George Norman, U.S. Corps of Engineer area engineer. The tug is piloted by Donald Burns with Clarence Mason working as deckhand.



Great Falls Tribune Bureau Warns Of Ice Jams On Missouri

HELENA (AP)—Ice jams on the Missouri River could cause flooding of lowlands west of the Fort Peck Dam, the Weather Bureau warned today.

A special storming advisory urged stockmen in the area from the Fred L. Robinson Dam to near the Fort Peck Dam to move their cattle to higher ground.

The Weather Bureau said rapid flood might not permit further warning.

The U.S. Fish and Wildlife Service Thursday said rising water and warmer temperatures threatened a breakup of river ice and possible ice jams.

Much of the area involved is in the Fort Peck Game Preserve. The Robinson Dam is on Montana Highway 197 between Fergus and Phillips counties.

Water Storage Said at High Level in State

Billings Gazette

HELENA (AP)—Montana water reservoirs are high and there is more stream flow than is needed for power demands, the U.S. Geological Survey reported Saturday.

Irrigation water reservoirs showed about an average gain for the past month.

Western Montana mountain streams ranged to far above average for November. Prairie streams showed some gains from more than usual rain and snow yet the agency described their flow as about half of average.

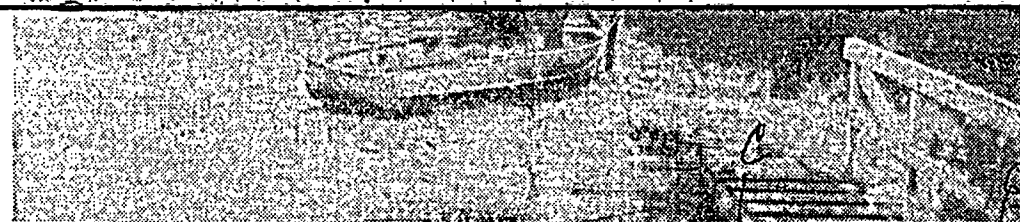
Honora Inspects

Backing the "Pepper" in many of the inland navy operations is a "Sea Mule," a work unit well-known to Navy men. Packing two marine engines of 145-horsepower each, the 31-ton craft doubles with the tug in hustling larger barges into place.

Much Diving

Surprisingly, a considerable amount of diving work goes on in various parts of Fort Peck reservoir. When periodic cleaning of tunnels is necessary, the divers, outfitted in deep-sea diving gear, are lowered into depths ranging from 65 to 145 feet, to attach cables used to remove trash guards over the tunnel inlets.

The operation is compared to threading a needle in a dark



FORT PECK NAVY.—This odd assortment of craft makes up the Fort Peck Army Corps of Engineer fleet operating in the eastern Montana reservoir. Included in the group is a going tug, moored at left; derrick boat used to handle heavy steel beams in construction work; a diving barge, right; and work barge and "Sea Mule," behind the derrick boat.

closet, equipped with boxing gloves. When the trash guards have been removed and the tunnels cleaned, the same process is followed in setting the mammoth guards back in place.

A major part of the Fort Peck

fleet is a diving barge, equipped with decompression chambers.

Top officers of the fleet is Capt. George Nowak, area engineer at Fort Peck, but the actual overseeing comes under the office of Don Belkman, chief of operations.

Although a land diver by trade, Belkman often dons the heavy diving gear for a plunge into the green depths. And as you might expect, one of the hobbies of "Admiral" Belkman is skin diving.

Montana ice jams

RIVERDALE.—Lt. Col. Walter W. Hogrefe, Garrison District engineer, spent last week in the Montana section of the district on Corps of Engineer business. He flew by chartered plane to inspect construction on the second powerplant at Ft. Peck Dam, then proceeded to Bozeman, Mont., to take part in meeting of the Montana Natural Resources Council. One day was spent inspecting the ice-jam floods in Townsend and Three Forks, Mont. He was accompanied to Ft. Peck by H. G. Hutchins, district construction division chief.

Peck Reservoir Glasgow Courier Makes Gains 12-15-59 In Water Stored

Contrary to the usual reduction this season of the year, Fort Peck reservoir showed a gain in storage of 132,000 acre feet during November.

This was the report from the Missouri river reservoir control center in Omaha for the month's operations.

Pool elevation on Nov. 30 was 2208, an increase of 2 for the month. Total storage was 10,810,000 acre feet.

Total power generation at Fort Peck during the month was 61,000,000 kilowatt hours, with releases amounting to 461,000 acre feet, all passing through the power turbines.

Discussing operations of the five main stem reservoirs, the report said the arrival of unseasonably cold weather in mid-November caused an early freeze-up of the Missouri river above Omaha. This reduced flows at Omaha to near seasonal records, and temporarily raised power loads at the main stem power plants.

To relieve the low flow situation at Omaha caused by ice storage in the river, releases of water from Gavins Point Dam were increased temporarily for a few days from the normal seasonal discharge level of 8,000 cubic feet per second up to as high as 11,000 cubic feet per second. But before the effects of the increased releases and return to milder weather, the sudden freeze-up and accompany ice blocks in the river caused the discharge at Omaha to drop to 3,800 cubic feet per second. The river stage sagged to 2.6 feet which was within 0.2 of a foot of the all-

Yellowtail Great Falls Tribune Inclusion in 12-17-59 Budget Seen

BILLINGS (AP) — Money to start construction of Yellowtail Dam may be included in the President's New Year budget, Rep. LeRoy H. Anderson reported Wednesday.

"If it is not," he said, "congressional action to include the project will not encounter veto action by the President." Anderson spoke to the Billings Chamber of Commerce committee on national and state affairs.

The proposed structure on the Big Horn River in southeastern Montana would cost 110 million dollars and has been sought by Midland Empire residents for a quarter of a century.

The Democratic lawmaker, in a prepared statement, said planning and acquisition of right-of-way has progressed to the point where work could be started if the money is appropriated about 90 days after the calling of bids.

"Hundreds of men at work in this area would signal the beginning of a new era of expanded prosperity for the Midland Empire and indeed, a large part of Montana," Anderson said.

Sun River Flood Control Development Great Falls (Mont) Tribune In Stages to Be Topic of Conference

Accomplishment of lower Sun River flood control projects in stages will be discussed at a meeting of Army Engineers with representatives of the Great Falls administration and county commissioners next week.

The meeting will be in the council committee room Thursday, according to Mayor William H. Swanberg. The meeting will include the mayor, city engineer, county commissioners and federal engineers.

Swanberg said the group will discuss the possibility of revising the flood control plans to permit accomplishment of the work in sections.

He said he was interested particularly in accomplishing work which would provide improvements projected in the Watson Coulee section of the project and the Country Club addition work.

The original flood project of flood control had called for the city expending about \$750,000 for right of way for dikes and other projects under the plan.

The mayor said if the government will permit a "piecemeal" accomplishment of the work, the city would be more capable of accomplishing the various sections. The total project, he said, is too large to handle at one time.

Swanberg said Chester Sullivan, Fifth Ward alderman, has been urging action on flood control for the west side.

The two projects mentioned by Swanberg as of prime consideration are a part of a large-scale plan prepared by the Army Engineers in 1955. The engineers' plan at that time called for a federal government expenditure of \$2,100,000 on construction of various control structures. The city or "sponsoring agency" would have had to purchase the right of way and move utilities.

The total project called for laying an interceptor ditch diverting Watson Coulee into the Sun River upstream from the city limits. Another interceptor ditch would have carried Hill 57 run-off east along the Milwaukee right of way and into the Missouri river.

From a point near the discharge

Flood Suit Taken Sheridan (Wyo) Press To Supreme Court 12-18-59

Sent to the Wyoming supreme court today from Sheridan county district court was the appeal of Donald Sump from dismissal of his suit against the City of Sheridan seeking to halt the flood control project.

In October, District Judge G. A. Layman upheld the city's contention that it is not spending funds illegally or unlawfully and is spending only those funds properly authorized by the city budget ordinance.

Missouri River Threat to Lowlands Subsides Billings Gazette

LEWISTOWN (AP) — The threat of lowland flooding has subsided along a stretch of Missouri River north of Lewistown.

The Fish and Wildlife Service Tuesday said ice jams had broken up, believing the flood threat for about 10 miles of lowland between the Fred Robinson Bridge east to the start of Fort Peck Reservoir.

Butte Firm Gets Madison Project Billings Gazette

RIVERDALE, ND (AP) — The

ency, the transition to winter operations of the main stem reservoirs had been completed early in November, with Gavins Point releases leveled off to about 8,000 cubic feet per second by November 10. This rate of discharge was resumed after the mid-month freeze-up.

Total water storage in the five operating main stem reservoirs stood at 23,394,000 acre-feet at the close of November. This represents a gain of 2,574,000 acre-feet for the system over the total storage on the same date last year. Total power generation at the four operating power plants in November 1959 amounted to 228,000,000 kilowatt-hours, as compared to 212,000,000 kilowatt-hours in November 1958.

\$9,700 contract for repair of flood control levees along the Madison River at Three Forks, Mont. The award was made after a bid opening at the Corps of Engineers Garrison district office.

The government estimate for the work was \$9,400. There were five other bidders as follows: Long Construction Co., of Billings, \$20,000; Gardner Construction Co., of Bozeman, \$16,000; J. J. Reese, Three Forks, Montana \$17,500; F. L. Flynn Co., Billings, \$11,250; Cocanougher Construction Co., Twin Bridges, \$17,750.

The damage to the dikes was caused by an ice jam flood in the Madison River after a heavy snowstorm in early November.

More Multi-Purpose Dams Due in Montana

Independent Record, Helena, Mont. 11-30-59

Building of multi-purpose dams in Montana and neighboring states over a period of four decades or a little more, finds only one major stream in this state that might be said to be under control. The Missouri river with a series of private and federal dams in under fairly close control. The menace of floods downstream is at a minimum. Dams in Montana, North and South Dakota now are functioning well.

But the Yellowstone is not under control, neither are some western Montana streams. A hearing will be held in Missoula in December to gain more information and to explain intentions to residents affected, on the Knowles or Para-

dise sites. A dam at Paradise would cost around half a billion dollars and eventually would generate a million kilowatts of prime power. It would be part of the northwest states complex of dams and reservoirs that continue to be built on the Columbia river and tributaries.

The Columbia watershed is far from under control from the standpoint of floods. Only a short time ago an unexpected thaw and heavy rains brought floods to northwest states. More dams such as Knowles or Paradise will be needed to give that vast watershed as much control as the upper Missouri river basin.

West Friends for Middle Ground in Missouri Basin Water Dispute

ATCHISON, Kan. (U.P.) — A spokesman for the Western States yesterday pleaded for a "middle ground" in the long controversy over federal and state water rights in the Missouri Basin.

Ray Moses, Alamosa, Colo., attorney for the Colorado Water Conservation Board, said the West was willing to concede that there were certain areas where the states must forever remain subordinate. "But I think that in all the heat it has been generated on the subject of conflict between state and federal water rights the federal government overlooked the fact that the West is already settling the federal government its way," Moses said.

He spoke at the 110th meeting of the Missouri Basin Inter-agency Committee.

Moses admitted the power of the federal government in navigation matters but he said "our animosity is a little strained." He

argued that Congress be limited in this navigation rule by the 1944 flood control act and the O'Mahoney-Milligan amendment. Moses endorsed the proposed lands bill which would provide that the withdrawal or reservation of public lands should not affect any right to the use of water acquired pursuant to state law.

He said if the bill were passed and "if our efforts are unremitting, we really have limited the problem to the ownership of unappropriated water rising upon federal lands. This is a considerable progress."

Moses said that although the battle will continue to rage, "two things give me hope to believe the middle ground I have recommended may result in an uneasy equilibrium."

One is that most multi-state projects are eagerly sought by the affected states so that waiving of crippling state requirements may

be made a condition of authorization of the expenditure of federal funds.

The second ray of hope comes from the support the so-called arid states are beginning to receive from the so-called humid states.

Four governors are attending the meeting, including George Docking of Kansas.

Editorials

Some Points in Our Favor

Bismarck Tribune 12-19-59

Several items of information made known at this week's meeting of the Missouri Basin Inter-Agency Committee in Atchison, Kansas, are of interest for the implications they have in North Dakota.

One is the rising demand for slack-water navigation on the Missouri, which speakers at the Atchison meeting indicated might some day be extended as far north as Bismarck and beyond.

This may seem like a far-fetched dream today, but as Gov. Herschel Loveless of Iowa said it is impossible to foresee needs 20 and 50 years hence. The tremendous industrial complexes of the Ohio and Mississippi River valleys are based largely upon water transportation, and eventually national requirements may force opening of the upper Missouri to barges.

Another point was the news that the \$350 million being spent to tame the lower Missouri will "create" 1,800,000 acres of "new" farm land by confining the river to a single channel.

Apparently the federal government, and downriver states, are not concerned about this addition to the nation's productive acreage. This being true, they should not express concern over the fact that Garrison Division would add to

neers spokesman indicated it is within the Corps' scope to spend hundreds of millions to stabilize banks so as to prevent erosion and increase land values on the lower Missouri, and therefore it must concede that expenditures for the same purpose should be proper along the river between Bismarck and Garrison Dam.

To date, however, the Corps has evinced no enthusiasm about the latter proposal, although the 50 or 60-mile stretch below the Dam is the only part of the river between Ft. Peck Dam and St. Louis on which no work is planned.

By its own figures, the Corps more or less corroborates State Water Commission estimates that erosion is destroying about 440 acres of land per year along the river below Garrison Dam.

The Corps held that a proposed lowhead dam above Bismarck-Mandan would not be feasible because the proposed 1,000-acre reservoir would fill with sediment within two to five years. Most of this would come from bank erosion, possibly at as high a rate as 800 acres a year, certainly not less than 300 acres a year. Since the river's banks average 10 feet in height, to pick up 45,000 acre feet of sediment it would have to cut away 1,500 acres. (Only a minor amount of this sediment is

11 Minot (N.D.) Daily News
Saturday, Dec. 19, 1959

Visits Riverdale



Gosta Petersens, Swedish con-

12-18-59 Garrison Power Delay Expected

RIVERDALE W — Mechanical trouble detected in its initial run may delay the original January power-on-the-line schedule for generating Unit No. 4 at the Garrison Dam hydroelectric plant here, the Army Engineers said.

Necessity of removing several pieces of heavy equipment to diagnose the trouble and make repairs may delay the generator's service start a month or six weeks, said Col. Walter W. Hogrefe, Garrison district engineer.

Unit No. 5, also being installed, is scheduled to go on the line next July.

These two units will complete Garrison's power installation, bringing total capacity of the plant to 400,000 kilowatts. Three 80,000-kilowatt units have been producing power since 1956.

day. He addressed the Riverdale post of the Society of American Military Engineers.

Neutrality Of Sweden Defended

Fargo, Forum
RIVERDALE, N. D. (AP) — Sweden's policy of non-alliance through two world conflicts and the current cold war was defended at a meeting of the Society of American Military Engineers here Thursday.

Gostaaf Petersens, that nation's consul general in Minneapolis, said if Sweden joined NATO or otherwise deviated from its neutral position, Finland would be swallowed by Russia immediately, thus bringing hostilities to Sweden's frontier.

Besides that, he said, "We don't feel our contribution to the western alliance could be very great."

Petersens said Sweden hopes NATO will succeed but doubts its efficiency.

Hired To Probe Tunnel No. 4

Minot Daily News
RIVERDALE—Two deep-sea divers from the state of Washington—Bill Harris and Bett Carnes—were in Riverdale this week to remove obstructions that might be impeding the movement of water in power tunnels No. 4 and 5.

These two units are now being installed in the power plant. No. 4 is scheduled to go into service in January and No. 5 in July.

The divers were called when operational deficiencies were reported in tunnel No. 4. Harris lives in Spokane and Carnes in Newport, Washington, and both are connected with commercial diving concerns.

It has been necessary to employ divers several times during the past few years on the Garrison dam project.

acres of North Dakota land already in production.

If it is in the national interest to "create" 1,800,000 acres of "new" farm land in Kansas, Missouri, Nebraska and Iowa, it ought to be in the national interest to stabilize farming operations on a smaller acreage already in production in North Dakota. There should be no double standard.

Lastly, an Army Corps of Engi-

er floors—unless the river is about to scoop a tremendously deep lake out of its channel.)

There will be only 50,000-55,000 acres of river bottom left in North Dakota after Garrison and Oahe Dams fill their reservoirs. It would seem that the Corps of Engineers should be as interested in protecting and up-valuing this land as it is in doing the same for down-river land not one whit more fertile.

First Big Job On Stage One Of Water System Completed

Williston Herald

LESSER CHARGE

Initial completion of the first major portion of stage one of the city's new one-million-dollar water system was completed late Saturday night with the pouring of concrete at the base of pier number 3 sealing in the intake pipe at the base of the pier where the water supply will be taken from the river at the Lewis and Clark bridge site.

Work has moved steadily ahead by the Peter Klewit Sons Construction crew, never stopping for snow or cold weather that has dogged the area with its earliest winter blasts of many a year. And the next week or ten days will in all probability provide the last opportunity visitors will have to view this initial stage of construction—most of which has gone on 15 or more feet below the actual flow of the mighty "Muddy".

For stage number one of laying the four-line section of intake supply from pier 3 to the intake structure will have then been completed and what has been the working area the past month or more will be covered with tons of clay and top soil, and never again come into view. The hundreds of sections of 20-inch cast iron river crossing pipe (11 freight carloads of it) with one-inch-thick walls have now been laid between piers two and three, and in the next ten days will be extended to the site of the intake structure on the river bank just south of the railroad tracks.

The concrete pouring operation Saturday night was to provide an 11-foot shelf for the housing of the pipe alongside the big bridge pier. Main inlet for the four-section supply line will be at the top of this big shelf. Then, as an extra means of precaution, a second inlet is constructed ten feet higher up along the pier. This, as explained by consulting engineer Willard Webster, would only be used should an unexpected

Another interesting "protective" measure will be when similar inlets are constructed on pier number two. In other words, should the main channel of the river ever shift farther to the north, then the supply could be taken through the pier two structure, which will be a duplicate of that at pier No. 3.

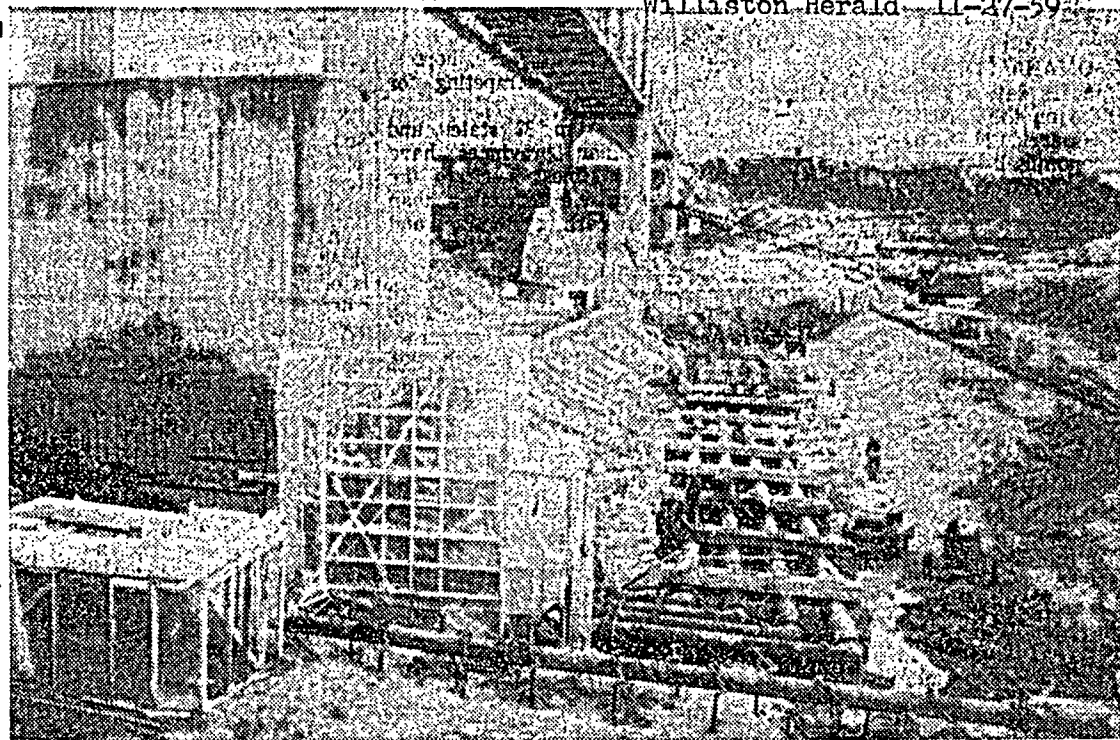
A rising river flow caused some concern Tuesday and Wednesday, undoubtedly resulting from heavy snows and rains on the upper Yellowstone. The main flow had gone up about three feet in 24 hours by Wednesday evening, and workmen had been busy with their big dirt moving equipment adding some four or five feet to the coffer dam surrounding the work area. The danger threat apparently had passed now however, as the crest today was reported at 39 feet 5 inches, and the Yellowstone was reported dropping slowly at Sidney.

The big four-line intake structure had been laid at a level of 1820 feet above sea level, which is 15 feet below the average flow of the river.

Webster, when asked as to possible corrosion or damage to the pipe line, explained cast iron pipe "never corrodes under water," and said the same went for piling timbers and those which provided the base for the line. As evidence of this sort of preservation, one could see some of the original wood form work along side the huge bridge pier which has been there since construction of the bridge some 25 years ago, and which shows no decomposition.

When this initial stage is completed, work will then be started on stage two, of the intake structure. This will include a raw water well with a screening process and pump to carry the water to the pre-sediment basin and grit chamber. These will be explained in later installments, as the work progresses.

Williston Herald 11-27-59

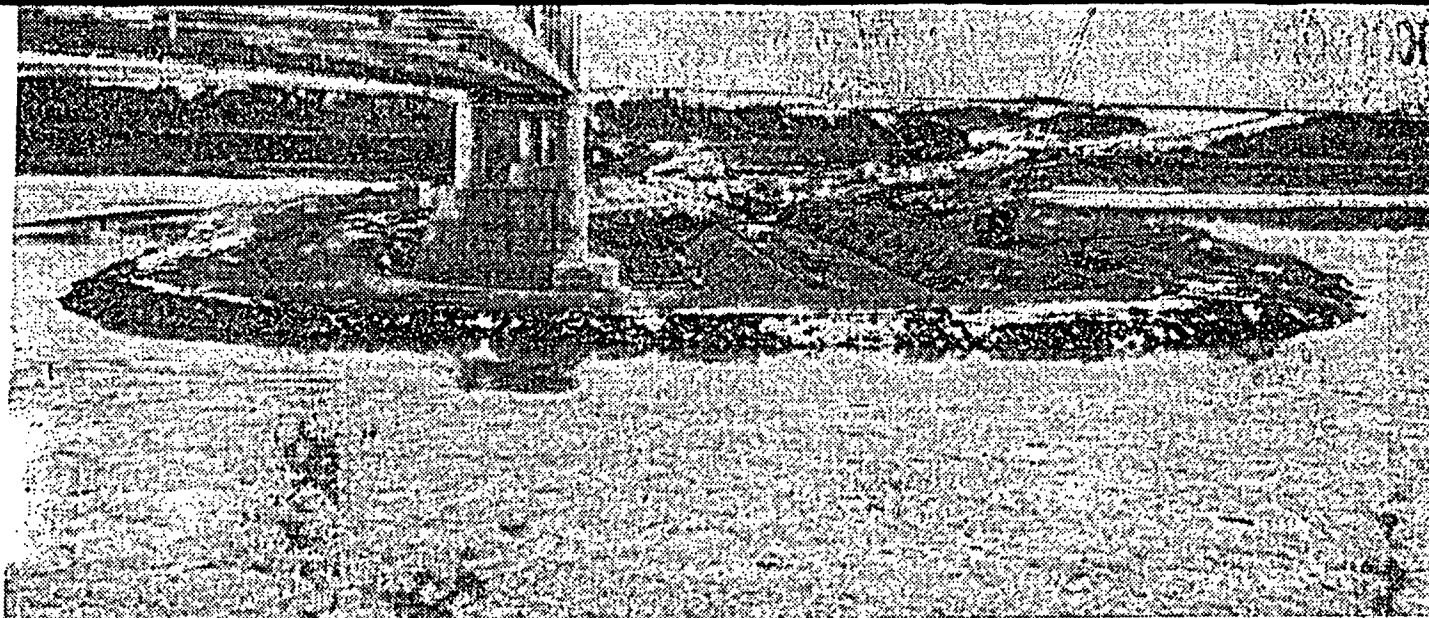


INITIAL WORK COMPLETED — This is a picture story of the four-line intake supply which will be bringing water from the Missouri river, first to the intake structure, and finally through huge transmission lines to the city. The plastic-enclosed structure at lower left is where concrete was poured during snow and cold Saturday night. Work will move ahead on extending the supply line another 75 or 100 feet to the bank on the south side of the G.N. tracks, carrying the water by gravity flow into the intake structure. (More pictures on page 10)

off regular flow into the lower inlet. "It seems quite improbable," Webster said, "that this higher inlet would ever come into play—but it's just a measure of extra protection."

"Web" also explained how the pipe was embedded in concrete along the pier structure, adding that it was hardly conceivable that damage in any way could come from winter ice flows in the river. This was all the more true, he added, "since the structure is placed along the lee side of the piers, which would further lessen any danger from ice flows."

The process of the pipe line installation was interesting to have traced by the engineer from the initial driving of huge timber piling down to shale or a maximum of 50 feet to support the big four-line pipe sections. Big cross sections of timber were then fastened to the piling, on which the pipe rested. Then over the top were other timber cross sections to which the pipe was again bolted, and each line inter-connected with separating sections.



SOURCE OF SUPPLY — Herald photographer Doyle Ennis here gives a graphic view of where workmen during the past month have battled the elements to complete installation of the water lines. Circling the

working site, 15 feet below the flow of the river, is shown the coffer dam structure where thousands of tons of dirt was moved by the Kiewit heavy equipment and hardy crew of workmen.

ABAC Hears Report on Status Of Project for Lower Missouri

Bismarck Tribune 12-18-59

ATCHISON, Kan. (AP) — The Missouri River Basin program could be completed with an outlay of 12 to 13 million dollars in each of the next five years. "If we get this project out of the way," he said, "there will be less competition for money for other projects."

THE RIVER STATES group — governors of the 10 states and their representatives — met as a preliminary to Thursday's sessions of the inter-agency committee. Gov. Herschel C. Loveless of Iowa was elected chairman of the river states committee to succeed Gov. John E. Davis of North Dakota. Dr. Garland Hershey, director of the Iowa Resources Board, will serve as secretary to the committee.

A. R. Weinhandl of Minot, a North Dakota delegate, told the committee he opposed the addition of any new projects in Missouri Basin development before completion of those scheduled in the flood control act of 1944. The Garrison diversion unit in North Dakota was originally authorized in the 1944 act.

FRED FREDRICKSON, Washington representative of the North Dakota Water Commission, told the Atchison meeting "high government officials" had expressed favor of several new Missouri project starts. He did not say what they were.

Milo W. Hoisveen, North Dakota state engineer and retiring secretary of the river states committee, told the meeting development of reclamation projects in the upper Missouri River states should keep pace with development of other phases of the basin.

Davis remained in Atchison Thursday to attend the Missouri Basin Inter-Agency Committee meeting. He planned to return to Bismarck Thursday night.

A. L. Bayone of Minot, representing the State Health department, pointed out that North Dakota has the required basic legislation to permit zoning the reservoir for commercial and residential

At this time it is 93 per cent complete from the mouth to Kansas City, 88 per cent from Kansas City to Omaha and 57 per cent from Omaha to Sioux City," said by contracting the river into a single channel.

HE SAID THE ENTIRE program — which involves navigation, flood control and the prevention of erosion — should be finished in the fiscal year which starts July 1, 1963.

The Missouri River States Committee, made up of 10 states in B. Hipple, publisher of the Capital the river basin, Wednesday adopted Journal at Pierre, S. D., said the

K. E. Krabbenhoft of Omaha, National Park service representative, led the discussion on zoning inasmuch as his service has had experience with the zoning problem at other reservoirs. Zoning, he said, is essential to prevent harmful uses of reservoir shore property that will lower values of adjacent holdings and result in unsightly surroundings.

Russell Reid, state historical society secretary from Bismarck, said it would cost several hundred thousand dollars to restore the Fort Stevenson as it was in the late sixties and seventies, which would appear to make that course impossible. However, he said, if the fort isn't restored on a nearby shoreside site, something should

likely would be set up to coordinate the zoning problem among the various counties, federal and state agencies involved as well as with the three Indian tribes of the Fort Berthold reservation, Dr. Bue said. The March 15 meeting will be held at the Recreation building in Riverdale.

Coming before the council, of which Dr. I. G. Bue, state game and fish commissioner is chairman, were the questions of restoration or providing markers for old Fort Stevenson and Fort Berthold, the sites of both now inundated by Garrison reservoir.

Possibility Of Lignite Road Construction To Be Explored

Minot Daily News 12-19-59

BISMARCK (AP) — The North Dakota Economic Development Commission is going to look into the possibility of using lignite coal to build roads.

Among routine business transacted by the EDC at its regular meeting here Friday was a request that Director Lawrence A. Schneider see what other states are doing in this field.

The Curtiss-Wright Corp. of New Jersey has developed a coal tar material for use in road surfacing. The firm has contracts with Kentucky and Pennsylvania to build some test roads to see how the stuff works out in actual use.

In both cases, the states are interested in new markets for their depressed coal areas.

It's not expected there will be any quick action to get a plant built in North Dakota to process lignite for use as a road oil, but the EDC wants to look into the possibility.

State Highway Commissioner A. W. Wentz said he is always interested in new products for road construction and has been waiting for information on the tests by the other states.

Producers of asphalt, the normal component of road mixes, have derided the new product as both more expensive and inferior in quality to their own.

Wentz noted one of the big problems in choosing road material is that it must withstand the wide temperature variations common in North Dakota.

If the coal tar derivative has properties which would make it stand up well under temperature

still interested in disposing of the two million ton stockpile of Lignite dug up when Garrison Dam was built.

The corps has been unsuccessful in finding a buyer for its stockpile, which is so huge it would disrupt the lignite market if sold for fuel.

North Dakota has large quantities of lignite in the western part of the state.

However, Wentz said his information is that the small amount of coal needed for the new road material probably wouldn't create a very large additional market for lignite.

Commission Plans Steps To Mark Reservoir Historic Sites

Bismarck Tribune 12-19-59

RIVERDALE — Initial steps to provide recognition of historical sites in the Garrison reservoir area and the setting up of zoning regulations to prevent unsightly buildings and grounds were taken here at the third meeting of the Garrison Reservoir Interagency council.

Coming before the council, of which Dr. I. G. Bue, state game and fish commissioner is chairman, were the questions of restoration or providing markers for old Fort Stevenson and Fort Berthold, the sites of both now inundated by Garrison reservoir.

Russell Reid, state historical society secretary from Bismarck, said it would cost several hundred thousand dollars to restore the Fort Stevenson as it was in the late sixties and seventies, which would appear to make that course impossible. However, he said, if the fort isn't restored on a nearby shoreside site, something should

expensive, Wentz said.

The Corps of Engineers office at Riverdale has suggested also that the Economic Development Commission look into the possible new use for lignite. The corps is

Fort Berthold.

Further action on this item was postponed until officials of the city of Garrison can be present at a council meeting. The matter of a possible new name for the reservoir also was discussed and action delayed. Chairman Bue said that apparently the proposals to name the reservoir Sakakawea and Thompson had both been dropped.

At the council's next meeting on March 15, a special committee

would be set up by the council to use problems with the Indians on the Fort Berthold reservation.

Victor Kaliin, outgoing secretary of the council, outlined the \$400,000 worth of recreation development work done by the Corps of Engineers during the past 10 years. He cited the eight areas initially developed with minimum facilities such as boat launching ramps, picnic tables and grates, wells and roads, and said that three additional sites, Mahto Bay, Little Missouri and a tourist outlay west of Four Bears Bridge, had been added in the past year. Additional sites, he said, would be improved as public demand dictates. Kaliin served the council at his last meeting as secretary as he is being transferred this winter to the Fort Worth district office of the Corps of Engineers. He will be succeeded as secretary by Shirley Von Eschen, Garrison district reservoir manager.

A feature of the next meeting of the council will be a special showing of the new 16 mm Corps of Engineers color motion picture, "Reservoirs of Recreation."

Lack of Cooperation Reason Ten Mile Project Dropped

A flood control project on Ten Mile Creek at Helena was abandoned this fall because "local interests concluded they would be unable to provide the required co-operation," it was reported today.

The statement was made in an Army Corps of Engineers' report released in Gov. J. Hugo Aronson's office today. It said a study of flood control possibilities for Ten Mile were completed in September, but the plans for a project dropped because of the lack of co-operation.

A similar proposed project for Townsend on the Missouri River was also abandoned for the same reason, the report said.

The corps reported to Gov. Aronson its largest project in Montana this year was construction of a second power plant which is 90 per cent complete. It will provide 40,000 additional kilowatt units, the report said.

An unfavorable report was registered on investigation of flood control possibilities on the Sun River, exclusive of Great

Falls, has been completed, the Corps reported.

A survey of flood control possibilities at Owl Bank Creek at Browning is well advanced, it was reported.

Yellowtail Dam Sen. Mansfield Optimistic of Getting Funds

WASHINGTON (AP)—Sen. Mike Mansfield (D-Mont) was optimistic today over the possibility of getting construction funds for a Montana dam in 1960, a quarter century after it was authorized.

Congress authorized construction of Yellowtail Dam in 1934. The long delay in getting work under way has been caused, in part, by a dispute — now settled — with Crow Indians over how much they should be paid for their reservation land to be flooded.

Mansfield told a newsman he is optimistic, following three conferences with Secretary of the Interior Fred A. Seaton, that an appropriation may be made by Congress in 1960.

"While I received no definite assurance that Yellowtail would be included in the next budget request by the President," Mansfield said, "I am reassured by Secretary Seaton that, as far as he was concerned, personally he would give the Yellowtail proposal every possible consideration."

He said the four-man Montana delegation in Congress would work for an appropriation for Yellowtail Dam.

Seaton told Mansfield last October that cooperation with Crow Indians would be needed to complete the project.

Unusual Situation Reported At Fort Peck Reservoir

GLASGOW — Above-normal autumn precipitation and releases from several upstream dams have brought about an unusual situation in the Fort Peck reservoir.

This was the word from Dightman, Helena, state climatologist for the Weather Bureau, in response to a query forwarded through Dwight Baertch, meteorologist in charge of the Glasgow Weather Bureau Station.

The reservoir gained more than 130,000 acre feet of storage during November, and was continuing to rise this month, according to figures supplied by the Fort Peck area office of the Corps of Engineers.

Much of the huge drainage area of the Missouri above Fort Peck reservoir had above normal precipitation from August to November, the Helena official said.

All the low level snow and much of the mountain snow that came in early storms had since melted and added volume to the Missouri's flow.

Normally, Fort Peck reservoir gets its big storage boosts in March and June "rises" of the Missouri.

Another factor has been a drawdown in Hebgen Dam, above

Glasgow Lake, on the Madison river. The dam is operated by the Montana Power Co. and, while it stood fast in last August's earth movements, its reservoir is being drawn down in preparation for early spring dam repairs.

Canyon Ferry, Bureau of Reclamation dam near Helena, was full when the cold wave hit in November. Because of ice jamming near Townsend, it was necessary to release more water from Canyon Ferry than had been planned originally for the autumn season, Dightman said.

Public Still Prohibited in Quake Area

BOZEMAN (AP)—The Madison Canyon slide area still is closed to the public.

hectars remains in effect came from Supervisor George H. Divendack of the Gallatin National Forest.

He said the order was necessary because of danger of rock slides and the fact that the road is not suitable for public travel.

The ban on travel into the earthquake-caused slide area will remain in effect until improvements are made to the road and proper safeguards installed to protect the public, Divendack said. The remainder came shortly after crews installed a log chain and lock to serve as a barrier to prevent unauthorized travel between Highway 200 and the slide area.

The FBI is investigating the destruction and loss of the barrier.

this plan is complete. If so, the dam can be built. The Yellowtail Dam would impound water for irrigation and electric power generation. Its cost has been estimated at more than 100 million dollars.

Fort Peck-Bismarck Wire Contract OK'd

By Associated Press

Contracts for furnishing and stringing wire for a Reclamation Bureau power transmission line between Fort Peck, Mont., and Bismarck has been authorized, Rep. Don L. Short (R-ND) reported Monday from Washington.

Short said Hoosier Engineering Co., with headquarters at Columbus, Ohio, will get the job on a bid of \$3,080,050. Hallet Construction Co., Crosby, Minn., bid \$3,125,558 and Laurin Engineering Co., Pell Lake, Minn., bid \$3,154,000.

The line will add 310 circuit miles to the present 6,575 miles of Reclamation Bureau lines from

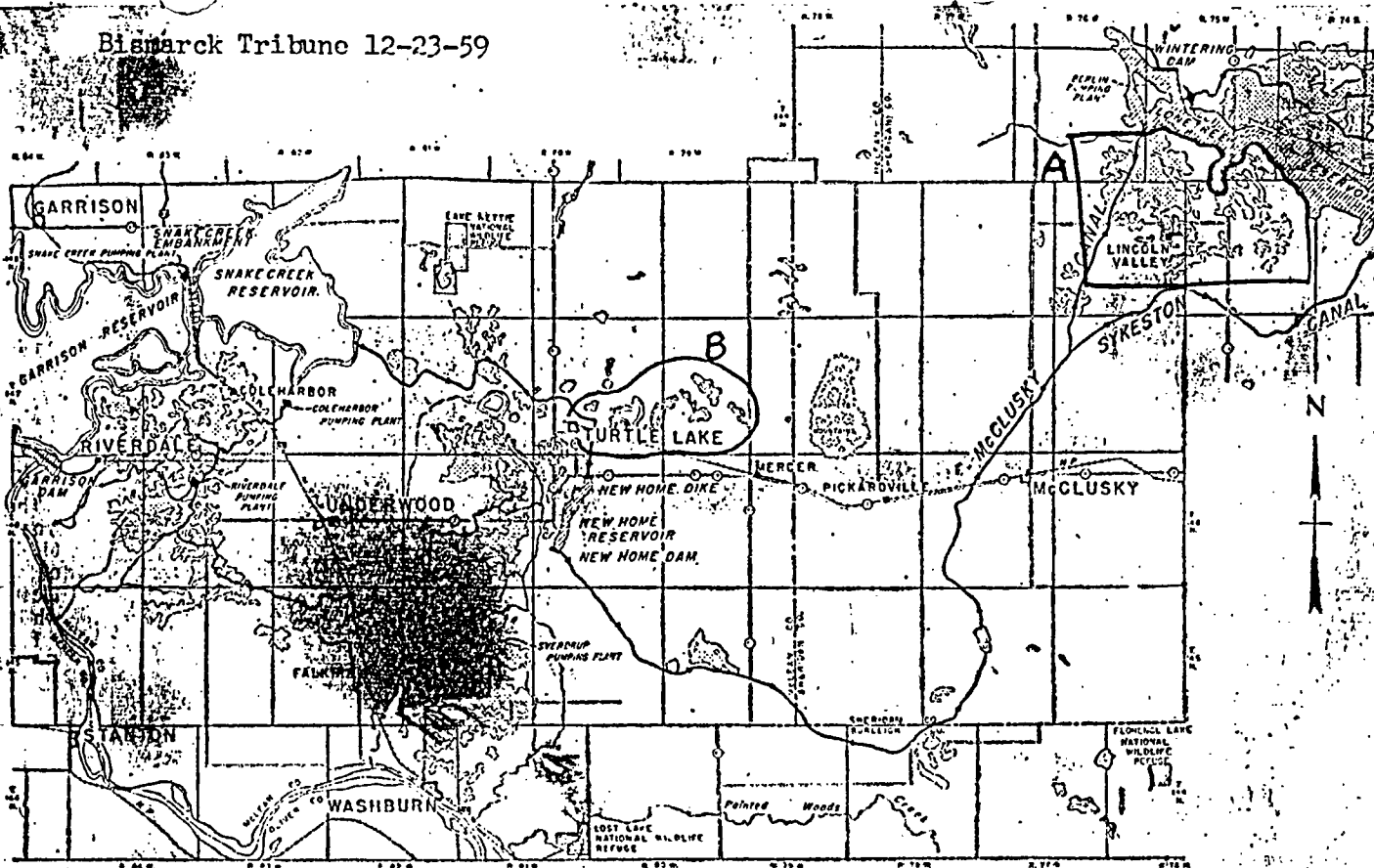
Missouri Basin hydroelectric projects.

Steel towers are being erected now for the line under a previously awarded contract.

Short said the segment of the new line from Fort Peck to the Reclamation Bureau's Dawson County, Mont., substation is to take 270 working days and the segment from Dawson County to Bismarck 360 days for completion.

The line will carry power from a second power plant completed at Fort Peck. It will join an existing transmission line serving customers in Montana, Minnesota, Iowa and Missouri.

Bismarck Tribune 12-23-59



LINCOLN VALLEY IRRIGATION—The area marked "A" within the heavy black line (top right) includes the 8,000 to 10,000 acres of the planned Lincoln Valley irrigation district. Map also shows route

of the McClusky Canal, from which water may be taken to flush out and build up lakes for recreation and wildlife between Turtle Lake and Mercer, marked "B".

Hearing Eyed On Future N.D. Water Needs

North Dakota's water requirements in the next 20 years were outlined to the U.S. Senate Select Committee on National Water Resources at the first hearing of the committee at Bismarck on Oct. 7. A contingent of 30 witnesses from all sections of the state and representing many agencies and organizations outlined the available water resources to the committee and pointed out the needs of various areas and possible methods to fill these needs. The Senate Committee, headed by Sen. Robert Kerr of Oklahoma, was established to study the needs for water resources development in the country between the present and 1980.

Gov. John E. Davis keynoted the hearing stating "The development of our water resources is the key to the growth and prosperity of North Dakota. New and expanded opportunities that will result through a sound water resources program will encourage our youth, our most precious resource, to stay in the state, reversing a trend of recent years."

Other witnesses emphasized the importance of the early development of the Garrison Diversion Unit as a means of solving the urgent water problems in central and eastern North Dakota. Numerous other projects including the Bowman-Haley and Pembler and many other dams, proposed irrigation projects, possible municipal water supply sources, and recreation developments were outlined for the committee.

"The orderly development of the three major water resource possibilities in North Dakota, the Garrison Diversion Unit, ground water aquifers and the storage of runoff water in smaller tributary streams can provide for a population increase in excess of 400,000 people in North Dakota by 1980," Milo W. Holsveen, secretary and chief engineer for the State Water Commission, told the committee. The development of these potential water resources projects in

Lincoln Valley Irrigation Area Nears District Election Stage

By JACK E. CASE
Tribune Staff Writer

Organization of North Dakota's seventh irrigation district appears virtually assured for the McClusky area in the early months of 1960. Spokesmen with the North Dakota Water Conservation Council

development Committee has apparently on the proposed district. If the water source, the Garrison Dam developed interest to the point reaction there warrants, he will reservoir. where formal organization is at then set an election date at which. The lands lie on the shores of the farmers will formally vote on the proposed Lonetree reservoir, the formation of the district and the key structure in plans for diverting water from the Garrison Dam. In the past, districts of that ap-

weeks by the area's Farm Development is land operated by some 100 farmers.

Petitions requesting formation of the district have been circulated in the area for some time and are expected to be filed with the state engineer by Jan. 15.

AFTER RECEIPT of the petitions and verification of the number of signatures, the state engineer will then schedule a hearing

It is expected that the district will be formally organized by April 1 of next year.

At present the state has six irrigation districts formally organized including some 308,000 irrigable acres.

THE LINCOLN VALLEY District, when formed, will be the closest one thus far to the primary

receive its water from the main McClusky canal which will be delivering water to Lonetree and other points to the south and east. As its most immediate benefit, formation of the district will provide the landowners with authority to negotiate with the federal government and the Garrison Conservancy District for water which will be required when irrigation actually commences.

of \$900 million.

The recently organized North Dakota Water Users Assn. held its annual convention in Bismarck in conjunction with the Senate hearing. Senator Kerr was the principal speaker at the banquet of that association on Oct. 6. The Water Users Assn. was established in February 1959 by an amalgamation of the North Dakota Reclamation Assn. and the Missouri Souris Projects Assn. L. C. Mueller of Oakes is president of the association and Oscar N. Berg of Minot is secretary. This association provides every citizen in the state the opportunity to invest and participate in the present and future water projects which are being proposed for North Dakota.



BLACKTAIL DAM—Earthmoving equipment placing the 300,000 cubic yard embankment at Blacktail Dam 25 miles northwest of Williston. This dam was one of six projects constructed by the State Water Commission in 1959.

Blacktail Dam Biggest Of Six Projects in 1959

Bismarck Tribune 12-28-59

Included in the State Water Conservation Commission's construction program during 1959 were six projects involving new construction. These projects include new dams that will be utilized for recreation, fish and wildlife and municipal water supplies as well as lake restoration facilities.

Largest and most impressive of the projects is the Blacktail Dam in Williams County, located on Blacktail Creek, about 25 miles northwest of Williston, which was completed late in 1959 at a cost of approximately \$80,000. The dam is a rolled earth filled structure with a glory hole type spillway and will store approximately 1,760 acre-feet of water and will cover an area of approximately 125 acres.

ABOUT 235,000 cubic yards of selected earth fill material were placed in the 53 foot high, 2,000 foot long embankment. A 6,000 cubic yard blanket of rock riprap will cover the upstream face of the embankment. The reservoir behind the dam will average 14 feet in depth with a maximum depth of 33 feet which will assure water in sufficient depth to maintain fish life over the winter.

The spillway structure consists of an 18 inch steel pipe through the embankment. An emergency grass spillway has also been included as part of the project. The project was financed by the State

SCHMISEK LAKE DAM, located in Burke County northwest of the city of Powers Lake, consists of an earthen embankment and a natural spillway that was constructed to raise the level of Schmisek Lake enhancing its use for recreation and fish and wildlife purposes. The project was accomplished by the State Water Conservation Commission in cooperation with the State Game and Fish Department, Burke County, and the Burke County Water Conservation and Flood Control District.

The earth embankment, which was constructed at the outlet of South Lake, raises the level of that lake so as to join it with Schmisek Lake creating an impoundment of approximately 196 acres in size with a maximum depth of 25 feet. Prior to the installation of the dam South Lake covered an area of 17.8 acres and Schmisek Lake an area of 22.4 acres. The embankment contains approximately 33,000 cubic yards of earth fill and was completed at a cost of \$20,800 which was shared by the cooperating parties.

A NEW METHOD of conserving water for municipal use was accomplished at Ellendale when an underground dam was constructed to restrict the flow of water through an aquifer that

numerous individuals interested in providing a method of restoring Wildwood Lake, the State Water Conservation Commission installed a pump on the Missouri River, which is used to pump water from the river through a canal to fill Wildwood Lake. This installation was accomplished at a cost of \$1,594 which was shared by the State Water Conservation Commission and the State Game and Fish Department. The local interested sponsors financed the cost of digging a ditch from the river to the lake and paying for the installation of a power line and operation and maintenance costs.

ALSO INCLUDED in the Commission's construction program in 1959 was the installation of a drop structure in Richland County Drain No. 2. Because of an excessive slope in the lower reaches of this drain erosion was occurring up the drain from the point where it discharged into the Wildrise River. This erosion was destroying many acres of valuable farm land and was also endangering a bridge on Highway No. 81, which is now being used as a farm to market road. The State Water Conservation Commission and the Richland County Water Conservation and Flood Control District cooperated in constructing a reinforced concrete drop structure having a crest length of 20 feet and a drop of 10 feet. This structure required

'Retailoring' Affected 59 Diversion Work By Bureau

A "retailoring" job was done on the Garrison Diversion project during 1959, looking toward a favorable report on feasibility from the Bureau of the Budget and eventual authorization of the first phase of 250,000 acres of irrigation by the Congress.

The Minot office of the Bureau of Reclamation dovetailed its activities into the revision of plans and also made some progress on long range planning of the overall million acre project.

Early in the field season of 1959 the remainder of the Warwick-McVille area, or the portion known as the Tokio area, was classified in detail and the completed work was reviewed by representatives of the chief engineer's office in Denver and the regional director's office in Billings, Mont. The appendix report is being prepared in the Bismarck office.

The land classification appendix report for the LaMoure area was completed and forwarded for review and approval.

During 1959, detailed topographic surveys, on a scale of one inch to 400 feet and a one foot contour interval, were completed on the Karlsruhe area. Approximately 59,000 acres were surveyed. Detailed land classification on the above area was also completed and drafting of the completed maps,

planimetry and tabulating of arable acreages, and preparation of general maps of the area is under way and will be completed early in 1960.

Detail topographic and land classification surveys were started in the Middle Souris area. This work will be continued in 1960.

Extensive studies were made of the James River valley between Lonetree reservoir and Oakes and changes that would be effected by increasing the flow in the river to serve lands in the southern part of the state (Oakes and LaMoure areas). A report on new structures needed and modifications of old ones was prepared. They included

acreage as anticipated by the latest proposed development of 250,000 acres, 116,000 acres of which will be in the Souris section. This work is being done with an eye to future enlargement and serving of the remainder of the project land.

Commissioner of Reclamation, Floyd E. Dominy, Regional Director F. M. Clinton, Bruce Johnson, project manager, and others met with the Garrison Diversion Conservancy District directors in Minot on July 24.

A Turkish engineer trainee spent three weeks in August with field crews working in the Karlsruhe area, to learn about our land classification and topographic mapping procedures.

Robert B. Horton, head of office engineering for the Minot office, transferred to the Atomic Energy Commission at Idaho Falls, Idaho, in May. F. Elmer Foutz, head of land classification in Minot, recently received notice of his selection for promotion and transfer to Bismarck and will report in Bismarck Jan. 11. His family will not move to Bismarck until suitable housing arrangements can be made and property owned in Minot disposed. In Bismarck, Foutz will serve as head of the Projects Office Land Resources branch.

the State Game and Fish Department and the Williams County Park Board.

It will provide one of the finest recreational areas in northwestern North Dakota. The Williams County Park Board contemplates an extensive program to develop the recreational area around the reservoir. The State Game and Fish Department has purchased a considerable acreage in the area to assure fishermen of access to the lake and are planning to stock the reservoir with various species of game fish.

HUNTER DAM, located on the outskirts of the village of Hunter in Cass County, will be utilized for much needed municipal water supply.

municipal water supply problem for many years. Investigations by the State Water Conservation Commission indicated that a feasible solution to this problem would be to provide a method of storing water in the aquifer from which the city obtained its municipal water supply.

A clay core was placed across this aquifer thereby restricting the flow of water through the aquifer enhancing its use for municipal purposes. This dam will, in effect, form an underground lake from which the city can obtain its water supply. The cost of the underground dam was \$6,950 which was shared equally by the State Water Conservation Com-

verts, railroad, bridges, Fish and Wildlife refuge installations and so forth. Costs of channel enlargement and improvements were compared against costs of a separate canal. Costs of rights-of-way for land adversely affected or flooded by increased water in the river, bank erosion and protective works required to protect certain areas and many other problems are considered in these studies and estimates. Meetings were held with boards of county commissioners, representatives of the Fish and Wildlife service, and others, to acquaint them with the bureau's plans and to solicit their recommendations.

Cost estimates for the principal supply works were reviewed and changes made as required for the new concept of serving a 250,000 acre project rather than the million acres originally contemplated.

Studies are presently being made of the realignment of the Velva canal to determine the most economical and most feasible route to serve the reduced

Major Developments Mark Diversion Progress in 1959

Bismarck Tribune 12-29-59

Several significant developments relating to the Garrison Diversion Project occurred during 1959. The Garrison Diversion Unit report, which outlined the plan for development of the project and obtained the information necessary to establish the feasibility of a project, was in the hands of the Bureau of the Budget in Washington, D. C., where it was being viewed.

According to information received from reliable sources in Washington, it is expected that the project report will be forwarded to Congress before Jan. 1, thus paving the way for Congressional approval of the project.

The Garrison Diversion Project was originally authorized by Congress in the Flood Control Act of 1944. Since that time, changes in the project, including location of irrigable lands to be served and the point of diversion of water

from the Missouri River, it has been determined desirable to obtain additional approval of Congress of the revised project plan. As soon as the project report reaches Congress, it is expected that hearings will be held and Congress can act on the proposal.

THE project report under consideration by the Bureau of the Budget envisions the irrigation of approximately one million acres of land scattered throughout central and eastern North Dakota and will provide adequate water supply for multiple recreation, lake reservoirs and wildlife and other uses.

Because of opposition to the Garrison Diversion Project from states in the lower Missouri River Basin and other alleged reasons, the Bureau of the Budget resisted giving approval of the original one million acre project at this time. Numerous conferences among officials from North Dakota, the Department of the Interior, and the Bureau of the Budget resulted in a general endorsement of a smaller project for the Garrison Diversion Unit of approximately 250,000 acres in size.

Following Congressional approval of the bill, modifying the authorization of the Garrison Diversion Project, it will be necessary to obtain adequate appropriations from Congress to initiate construction of the project facilities. Initial construction of the project is scheduled to get under way in fiscal year 1963, with the first lands to be irrigated four or five years after that date.

Original plans called for the development of irrigation in North Dakota under the Garrison Diversion Unit gradually over a period from 50 to 60 years. It can be expected that if the project is approved on the basis of 250,000 acres the initial project will be completed in from 10 to 15 years.

Studies by the Bureau of Reclamation of the 250,000 acre project now under consideration by the Bureau of the Budget were based on irrigable land located in irrigation districts that have been established. The smaller project actually has a better cost-benefit ratio than the larger one million acre project because certain expensive features necessary in the larger project have been eliminated.

THE GARRISON Diversion Conservancy District, and the irrigation districts in the Garrison Diversion Project area during the past year have been discussing repayment contracts with the Bureau of Reclamation. Those repayment contracts will set forth the amount of and manner of repayment of the farmers' obligations of the cost of the Garrison Diversion Project.

Because of the extensive nature of the Garrison Diversion Unit and the many purposes that it will serve, the repayment arrangements for the project are more involved than is usually the case in reclamation developments. The Garrison Diversion Conservancy District, who will be a party to the repayment contracts, plans to complete its preliminary studies of the contracts by Jan. 1. Contract negotiations will continue in 1960 so that the water users

Gen. Barney Gives Report On Missouri Basin Works

Bismarck Tribune 1-4-60

WASHINGTON, Jan. 3.—Gen. Barney, division engineer having an estimated federal cost of 765 million dollars at Omaha, Neb., had been constructed or essential. Stuart, Symington, and Fort Belknap, but only completed in the Missouri River Basin.

Work for 1960 in the Missouri River Basin is for approximately 146 million dollars of additional work to be awarded for construction.

As of Dec. 31, 1959, he reported, 27th shortly were projects with an estimated cost of \$1,330,000,000. In the planning stage were ad-

ditional projects with an estimated construction cost of 6 million dollars.

During the past year construction work on river control projects estimated at 92 million dollars was placed under contract in the river basin by the engineer. Appropriations for the water projects program in the basin for the year ending July 1, 1960, amounted to \$112,868,000.

Barney said that construction of major multiple-purpose dams and reservoirs on the main stem of the Missouri moved into the final stage in 1959 with initiation of construction on Big Bend Dam above Chamberlain, S. D.

ESSENTIALLY COMPLETED and operating were the Ft. Peck Dam in Montana, Garrison in North Dakota, Ft. Randall in South Dakota and Gavins Point on the South Dakota-Nebraska border.

Barney said major construction activity continues at Oahe Dam near Pierre, S. D. Remaining work in the dam site area there will be largely on power structures and the spillway.

He said construction is continuing on the fourth and fifth power generation units at the Garrison project and on the condenser power plant at Ft. Peck.

With addition of final generator units at Garrison by the middle of 1960, installed capacity of the main stem river plants will be increased to 905,000 kilowatts.

AS OF DEC. 10, 1959, the engineers reported the combined water storage in the main stem reservoir system had increased to approximately 23,800,000 acre feet, a gain of 10 million acre feet over a year ago.

Barney said construction progress was "good" during the last year on the Missouri River bank

Low-Head Dam Value Reiterated

In 1958 the State Water Conservation Commission advanced the proposal that investigations should be made into the possibility of constructing a low-head dam across the Missouri River near Bismarck which could take the place of the highway bridge that would be needed for the new interstate highway and at the same time provide a reservoir that would enhance the recreation use of the Missouri.

It was pointed out also that such a structure would provide a stable level in the river now encountered in pumping from the river for irrigation purposes. The Corps of Engineers was directed by Congress to make a study of the proposal and in 1959 released its report stating that such a project

THE STATE Water Commission has strongly urged the Corps of Engineers and Congress to take immediate action to eliminate this erosion condition. There are several methods through which corrective action can be taken. One would be through a series of jetties and other bank protective works. The low head dam proposal appears to be one of the most practical, but rather than one dam, a series of such structures would be needed beginning a short distance above Garrison Dam and continuing in a series of steps down the river to the headwaters of Oahe Reservoir.

Preliminary studies indicate that five or six structures would be required in this stretch of the river. The dams would be valuable for a number of other purposes including highway crossings,

studies that would determine whether or not such a project would be feasible. Studies by the Bureau of Reclamation have indicated a favorable cost benefit ratio and have established the feasibility of the smaller sized project.

BILLS NOW PENDING before Congress dealing with the modification of the authorization of the Garrison Diversion Project provide for three major changes in the original authorization. These changes are:

1. A change in the point of diversion to Garrison Reservoir.
2. Giving authority to the Department of Interior to acquire all needed right-of-way for canals by purchase rather than by using a reservation of canal right-of-way that was included in the patents on all land issued after 1890 for lands west of the 10th meridian, and
3. To authorize the inclusion in the project plan for certain fish and wildlife and recreation developments.

soon as Congress approves the project and makes appropriations available to construct the project facilities.

two to five years after it was completed.

This determination pointed out another problem that owners of the land along the Missouri below Garrison have noted with alarm since the Garrison Dam was placed in operation.

WATER RELEASED from Garrison is practically free of the silt load that is carried in its natural state prior to the construction of Garrison Dam. This clear water has a natural tendency to pick up silt and in so doing has caused extensive erosion below the dam.

Commission investigations reveal that from 500 to 1,000 acres of land are damaged to the extent that they are useless by this erosion. It is the silt picked up by the river from erosion that would have filled the reservoir in a short time if a low head dam were constructed in accordance with the Commission's 1955 proposal. Such erosion is another of the negative benefits from Garrison Dam to North Dakota.

of the Commission. Congress appropriated \$10,000 to the Corps of Engineers to study the erosion problem below Garrison and determine the best method of bank stabilization. This study is expected to be completed in 1960.

MILO W. HOISVEEN, chief engineer of the Commission, pointed out that there is a great concern on the part of landowners that another high dam will be built between the headwaters of the Oahe Reservoir and Garrison Dam thereby flooding the remaining Missouri River bottomlands in North Dakota. The low head dams proposed by the Commission, he pointed out, would raise the level of the river and create several excellent reservoirs but would not cause it to get over its present banks so very little or no land being used would be flooded.

The project is now 50 per cent complete from Kansas City to the mouth, he said. 38 per cent from Omaha to Kansas City and 57 from Sioux City to Omaha. Considerable progress was expected during 1959.

Barney said the engineers have initiated a study of the authorized agricultural levee program along the Missouri from Sioux City to the mouth of the river.

Barney said it is expected that contracts totaling between 250 million and 300 million will be awarded during 1960 in an eight-state region of Colorado, Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota and Wyoming. Accent will be on continental ballistic missile construction with contracts estimated to run in excess of 200 million dollars.

Current work involves 60 defense installations with contracts in force totaling \$344,500,000 as of last Oct. 15.

Flood Control Foes Organize

12-31-1959

Sheridan (Wyo.) Press

Legal Counsel Likely To Be Named For Impending Condemnation Suits

A move to obtain legal counsel for coming condemnation proceedings was initiated last night by a group of local individuals against flood control.

Responsibility for recommending legal counsel was placed in the hands of a seven-member committee composed of Dr. Pete Madsen, Don Sump, Bert Brooks, Basil Dean, and Mrs. Stella Withrow, plus new officers of the group, M. D. Jenkins, chairman, and Mrs. Guy Brown, secretary-treasurer.

Jenkins was elected last night to replace Drew Alger. Mrs. Brown had been serving as secretary-treasurer.

Mrs. Brown reported to the group a trip to Casper and a conference with Robert Rose, Casper attorney. She also read a letter from Rose, in which he said a brief would be sent the group, and in which he said that on the basis of what he knows of the case, the city can not condemn for the purposes stated. He also said he would have to come to Sheridan to examine all records.

At this point the question rose over who legal talent should be. The majority of those commenting favored employment of a local attorney or attorneys, with Rose to be employed if local attorneys desire. Some favored the hiring of Rose.

Legal counsel has become imperative for the group, particularly those along the first stage of the flood control program who have not given easements, since the city will soon file condemnation proceedings in district court.

Some of those present last night had already received letters from the city in which an offer was made for easements, and in which a reply deadline was set.

The letter said, "In the event we do not hear from you by that

Jenkins said last night, and City Manager Maurice E. Cole confirmed the statement this morning, that the Sheridan Real Estate association, when asked, was unable to obtain appraisers from among local realtors for the city.

Don Sump told the group, which numbered about 75 and most of whom were property owners along the first stage, not to worry about the letters, "we can find an attorney very easily."

He said he felt the main point upon which the legal fight should be waged is the issue of necessity.

Sump and Mrs. William Baertsch reported on a meeting with Cong. Keith Thomson (R-Wyo) when he was in Sheridan. Sump said, Thom-

son told them the matter is a local problem and can't be policed from Washington. Mrs. Baertsch said Thomson stated that the Army engineers are impossible, and that the engineers "would ruin us if they came in."

Drew Alger pretty well set the tone of the meeting, impressing on those present that they must fight flood control or worse things will happen in the future. Noting Casper, where an attempt was made to pave the entire city, he said these kind of things are characteristic of council-manager government.

Sum Seeks Project Data

Sheridan (Wyo.) press
Will contracts be let on the first stage of the Sheridan flood control without approval of, or a plan for completing the other stages?

This question is asked of the Army engineers in a letter from Donald Sump, Sheridan man who has been among the leaders of a group fighting flood control.

Sump says in the letter, which was sent to the district engineer at Riverdale, N. D., that if the answer is "yes" then his group will proceed in efforts to keep a contract from being executed. If the answer is "no", "We will plan on having funds and other matters available for construction of needed bridges," Sump wrote.

He wrote that the recent council-manager election made it clear the city council is interested only in the first stage, and that future councils will be involved in stages two and three.

Sump told the engineers that a "gratifying amount" of support from people who do not live near the channel, but who believe that the completion of the first stage without a plan for the balance of the project is most unsatisfactory.

"The thought of a 70-foot channel where it is not needed and no construction in all other parts of the city where a small amount of work is needed now does not make much sense," Sump wrote.

Decline Is Noted In Streamflow

Montana Standard

Butte, Mont.: 1-13-60
HELENA (AP) — Mild and dry

December weather was listed by the U.S. Geological Survey Tuesday as the primary cause of a gradual decline in streamflow throughout Montana.

However, the agency said in its monthly report on surface-water conditions, reservoir storage is above average and generally higher than a year ago.

Flow of streams in western Montana continued excessive and prog-

Corps Work Rushed On 2 Power Plants

RIVERDALE (AP) — Home stretch work on two major Missouri river power plants, those at Garrison and Fort Peck dams, and flood protection at Mandan, Williston and Sheridan, Wyo., will mark the 1960 construction program of Garrison District of the U.S. Army Engineers.

The work at Fort Peck during 1959 and in the early days of 1960 involves the completion of two multi-million dollar contracts for powerhouse superstructure and tunnel liners. Last year control shaft alterations and powerhouse foundations were finished under a contract exceeding \$2 million in value.

As 1959 ended, the second Fort Peck plant was about 60 per cent complete. The installation, estimated to cost in excess of \$25 million, will go into service late in 1961. It will bring the total cost of the Fort Peck project to about \$160,000,000, and boost the installed capacity of the Peck power plant to 165,000 KW.

Work at Garrison dam in North Dakota consists of completing installation of power plant units Nos. 4 and 5. Total cost of these units will run in excess of \$20 million. The two units, bringing to five the number of 80,000 KW generators in Garrison's power plant, are due to go on the line this year. They bring to virtual completion the construction work connected with the \$294 million Garrison dam and

proceeding in the Sheridan County District court to acquire this needed land."

City Attorney Bruce Badley said this morning that letters had been sent to all but three property owners who have not given easements. Most of the letters were sent Dec. 22 and 23, return receipts have been received from most of them. A total of 27 letters are being sent.

Badley said he is ready with all legal papers, and will file as soon as directed by the city council. The filing will be made in district court, and all property owners will be included in a single suit.

The city attorney said that if is normal court procedure for the court to appoint its own appraisers. He also said he plans on filing a motion for immediate possession concurrent with the filing of condemnation.

The offers contained in letters were arrived at by three city councilmen Walter Harker, N. A. Nelson and Kenneth Campbell.

want. We've got to stand on our rights," Alger said.

Alger reported that efforts of opposition group had delayed the letting of contracts on the first stage, and he expressed hope the delay could be stretched another two or three years.

Basil Dean, Sheridan man who has been opposed to the project from the beginning, talked briefly. He has been proposing dredging of the creek as a better approach to the flood control.

of the San...
prairie streams of eastern Montana was below median.

Contract Awarded Great Falls Tribune 12-5-60 For Power Line From Fort Peck

WASHINGTON (UPI) — Hoosier Engineering Co. of Columbus, Ohio, got a \$3,080,053 contract for work on 310 miles of the Fort Peck-Bismarck transmission line, Sen. James E. Murray announced Monday.

The contract, awarded by the Dept. of the Interior, calls for stringing conductors and overhead ground wires for 310 miles, the Montana Democrat said.

Work in the Fort Peck-Dawson area is to be completed in 270 days, and in 360 days in the Dawson-Bismarck area.

kilowatts.

Recreational demands on Garrison and Fort Peck reservoirs continued to increase as 1960 arrived, the engineers said. For the second straight year the visitor total at Garrison exceeded 350,000 persons in 1959. The tourists represented 10 foreign nations and all 50 states of the Union. Fishermen comprised a large percentage of the total.

More than 150 private owners have built cottages on the Garrison shoreline lots leased from the corps.